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ABSTRACT

Four numbers of the journal contain a variety of articles on methods and programs of accelerative learning and teaching, including: "Music Therapy and Education"; "The Effects of Background Music on Vocabulary Learning"; "Terminating the Tyranny of Time from 21st Century Education"; "An Example of Limbic Learning"; "Orchestration of Internal Processing"; "Suggestive-Accelerative Learning and Teaching (SALT) with Learning Disabled and Other Special Needs Students: A Literature Review and Meta-Analysis"; "SALT, Suggestopedia, and Other Accelerative Learning Methods in Japan and Europe"; "A Study of the Effects of Attitude on Short-Term and Long-Term Information Retention"; "Research on a Humanistic Language Teaching Model"; "Survey Evaluating SALT Teacher Training Workshops at Iowa State University, 1976-1984"; "SALT in South Africa: Needs and Parameters"; "SALT in Practice: A Report on Progress"; "Music and the Teaching of Xhosa, an African Tone Language"; "Suggestopedic Texts for Foreign Language Teaching: Some Literary and Didactic Considerations"; "Mobilizing 'Reserve Energy' at Work: A Composite of Common Learning Elements"; "A Pilot Study of Accelerated Learning in the Composition Classroom"; "Love: Unspoken Catalyst of Suggestopedia"; and "Pen Pals: A Relevant Approach to Teaching Basic Writing Skills." Book reviews and indexes are also included. (MSE)

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THE JOURNAL OF THE SOCIETY FOR ACCELERATIVE LEARNING AND TEACHING

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The Editor welcomes submission of manuscripts on an interdisciplinary nature relevant to all aspects of suggestive learning-teaching-therapy counseling within the theoretical and procedural confines of Suggestology and/or Suggestopedia. The JOURNAL FOR THE SOCIETY OF ACCELERATIVE LEARNING AND TEACHING will publish a wide variety of articles - including critical reviews, theoretical analyses, speculative papers, case studies, quasi-experimental studies, as well as reports of empirical research (basic or applied) of major significance. The basic focus is Suggestopedia theory , research and application.

MANUSCRIPTS should be typed on one side of standard (8 ½ x 11 non-corrasable) bond typewriter paper, clearly mimeographed or multilithed. *Do not use ditto.* The original and three copies (carbon or dry electrostatic copies) should be submitted. Authors should also keep a personal copy to check against proofs. *All material must be double-spaced*, with ample margins (1 ½ in. on each side and 1 ½ on top and bottom). Any paper should not be longer than 20 typewritten pages, excluding bibliography, footnotes, tables, figures, etc. In special cases, longer papers may be submitted for publication.

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Music Therapy and Education*

W. Jane Bancroft

Abstract. The use of music for specific therapeutic purposes is said to be a "modern" phenomenon; however, music therapy may be said to go back to prehistoric times. It is known that the historic ancients, the Egyptians and the Greeks, for example, used music in the treatment of physical and mental problems. In Western Europe during the Renaissance, physicians appreciated the effects of music on body and mind; in the 18th century an increasing number of physicians noted and investigated the purely physiological effects of music. It was not until World War II, however, that a research base was given to the field.

Music therapy can take two forms: passively listening to music or actively engaging in a group that is making music. While active methods are more creative for the participants as they involve such activities as singing, the playing of instruments and rhythmic games, passive methods (which involve audition) are often more suitable for therapeutic and/or pedagogical purposes.

Important elements to consider in the use of music for audition include: rhythm, melody, harmony and instrumentation. Rhythm has measurable physiological effects on the body, in particular, on respiration, pulse and heart rate. Harmony, melody and instrumentation produce psychological effects on mood and personality.

In addition to special education, music therapy is also appropriate for the education of the "normal" child. Elements of active and passive methods in music therapy have been incorporated into a number of learning systems, in particular, the Suzuki Approach, the Tomatis Method and Suggestopedia. These three methods differ in their utilization of "music therapy," but all feature music making, on the one hand, and listening to music, on the other.

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*Presented at the 1985 SALT Conference in Washington, D.C.

Since music facilitates learning and makes it more pleasurable, it can be said that music therapy can be of real benefit in education.

Music lends itself to therapy (or "healing") because music is a universal experience; its elements of harmony, melody and especially rhythm are fundamental elements to which everyone can respond. The use of music for specific therapeutic purposes is said to be a relatively new phenomenon--dating from the late 19th century. However, music therapy, in a broad sense, has a long history. Inferences about the use of music as "therapy" during prehistoric times are strengthened by the knowledge that it is used today for that purpose by "primitive" peoples. In some parts of Africa the medicine man still uses a magic drum and an Ouombi harp to play over the stomach of a patient and in the Indian tribes of Ontario, magicians and shamans are also music teachers. In every part of the ancient world, music (and musical instruments) served magical (or "therapeutic") purposes rather than aesthetic ones.

From the earliest records available to us, we know that the historic ancients used the arts in general and music in particular in the treatment of physical and mental problems. The ancient Egyptian priest-physicians referred to music as the "physic of the soul" and recorded their chant-therapies on the famous medical papyri. The Bible mentions the therapeutic value of music: "And it came to pass, when the evil spirit from God was upon Saul, that David took an harp, and played with his hand: so Saul was refreshed, and was well, and the evil spirit departed from him" (I Samuel 16:23).

The Greeks, who early understood the relationship between body, mind and soul, saw clearly the link between music and medicine. Apollo was both the god of music and the physician of the gods. Apollo's son Asclepius became the god of medicine. The temples of Asclepius were healing shrines, as well as temples of worship, and in attendance were hymn specialists as well as priests. Orpheus, first among mortal musicians, was credited with mysteries and cures; his playing could soothe savage beasts. The legend of Orpheus and Eurydice testifies to the power of music even over the underworld. Associated with Dionysus or Bacchus, god of wine and orgies, was the concept of an unrestrained and undisciplined music that appealed to the senses. The mysteries associated with the Dionysian rites were marked by exhilaration, ecstasy, wild dancing and throbbing music. In modern music therapy, we can discern both Dionysian and Apollonian elements. Music engages the emotions and can be used to arouse and energize; it can also be used to assuage and soothe.

The Greeks made use of music as therapy in the rational as well as the mystic domain. Plato considered music a "medicine of the soul." In keeping with the Greek search for order in all things, music was viewed as an ordering, as well as an aesthetic discipline; in fact, it was commonly associated with mathematics and the harmony of the universe. When the soul had lost its equilibrium, according to Plato, melody and rhythm helped restore it to order and concord. Aristotle said that music performed the function of "emotional catharsis" for persons suffering from uncontrollable emotions. Pythagoras, the mathematician-physician, used dance and music with mental patients. He introduced a theory of psychobiosis, in which music (or "musical medicine") played a central role in promoting order, proportion and measure.

The Greek use of music in "therapy" apparently focused on listening to music, rather than making it. Although Aristotle advocated the use of musical rattles as an outlet for the pent-up energies of otherwise destructive children, the major historical references seem to be on the calming effects of listening to music. When a disorder developed, the Greek physician tried to restore the lost balance in the physical arena with medicine, on the mental plane with music.

Throughout the Middle Ages the practice of medicine in Europe consisted largely of prayer, incantation, exorcism, bleeding and crude surgery. Music (i.e., sacred music) was considered to be an instrument of God; "pagan" dances in the Dionysian mode were, however, of the devil. In the Islamic world, on the other hand, scholars had rediscovered the works of the ancient Greek philosophers and mathematicians. In medicine, the Arabic physicians, like the Greeks, saw the body and soul as intertwined. Both were subject to the laws of nature that frequently were described in mathematical and musical terms. In Cairo, to which the earliest known hospitals in the Western tradition can be traced, music was played continually in the wards; human voices and stringed instruments were chosen in proper proportion to musical regularity and the universal order.

It was not until well after the Crusades that the Europeans rediscovered the ancients--a rediscovery that came about largely through the work of Moslem and Jewish scholars. The Renaissance interest in classical civilization provided the impetus for a renewed interest in the "arts therapies," especially in the medical use of music. Many physicians of the day were music lovers and music players so it was natural that the Greek beliefs about the relationships between music and health should hold a special interest for them. While music was somewhat uncritically said to cure a multitude of ills (even pestilence!), the physicians of the Renaissance, like the Greeks, appreciated the effects of music on an individual's state of mind and its value in preventive medicine.

With the Scientific Revolution following the Renaissance, a more organized approach was given to the investigation of the arts in medicine. As during the Renaissance, the emphasis was on music; during the 18th century, an increasing number of physicians noted and investigated the purely physiological effects of music, particularly the relationships between bodily and musical rhythms and between pulse and musical beat. They observed the effects of music on breathing, blood pressure and digestion, as well as on mood. The old claims of miracle cures and the argument that music is a general panacea were subjected to critical appraisal.

While certain Victorian intellectuals such as Thomas Carlyle and John Stuart Mill held a remarkably modern view of the interdependence of body and mind, English and American Victorians of the 19th century downgraded the body and the arts therapies. The rediscovery of the body and the re-emergence of the arts and music in the treatment of disorders can be attributed in large part to the development of modern psychotherapy and modern psychology.

Before World War I, music was occasionally played to mental patients on the assumption that it relieved mental strain and emotional blockage. Between World War I and World War II, music was played largely as a general soporific and morale builder; listening to soothing music was a humane way for patients to while away their convalescence. The need to help the swelling populations of veterans' hospitals during and after World War II gave an impetus to research in music therapy. The "talking cure," which had been the standard treatment for mentally disturbed patients, was no longer adequate or feasible in view of the large numbers of patients in hospital wards. The energizing and tranquillizing drugs that were developed and used during the 1940s and 1950s were seen, at first, more as ways of making patients more amenable to psychotherapy than as treatments in themselves. Music therapy was used, together with other "activity" programs in a "supportive" sense. Challenged by hospital administrators, music therapists were obliged, however, to demonstrate the value of their work through empirical tests.

During the 1940s and 1950s, investigators began to probe the relationships between music, physiological changes, mood changes and general mental health. There was both an "objective" and a "subjective" side to this research. Objectively: music has measurable physiological effects on the body and these physiological changes can be measured scientifically. Subjectively: music has psychological effects on mood and personality; some people prefer one piece as opposed to another and a given piece of music has different effects on individuals suffering from different "disorders." It was found by researchers that listening to music produced changes in blood flow and blood pressure, changes in posture, respiratory rate, pulse rate and general activity. Researchers also demonstrated that listening to music produced mood changes ("measurable" mood changes) and that listening to and playing music were effective antidepressant measures. However, in spite of "scientifically" established music preference tests, patients' responses to music are often incongruous and unrelated to the nature of the music to which they listen. A neurotic, for example, might describe "light" music as depressing or restless; a psychopath might characterize every piece as gleeful. Stories told after listening to a range of excerpts might vary (and have varied) from patient to patient.

Since World War II--especially in the United States--research in music therapy has tended to center on the areas of specific problems, such as autism, behavior disorders, mental retardation and physical disabilities. Music therapy has been defined as the controlled use of music in the treatment, rehabilitation, education and training of adults and children suffering from physical, mental and emotional disorders. In the United States, in particular, research in music therapy tends to be "scientific" and "behaviorist." Narrow bodies of findings have been developed in specific areas on a pragmatic basis. Not too much research seems to have had wide theoretical applicability. However, given the concern for scientific validation, research in music therapy still leaves much to be desired, according to some within the field. Many articles are in the form of testimonials. A survey of recent articles in the Journal of Music Therapy reveals that contributions still consist of a mixture of experimental research findings, descriptions of programs and hypotheses of treatments that might work.

In 1964 at a conference in Lawrence, Kansas, the consensus was that there are three ways in which music can contribute to therapy: 1) since music is a social art, it can help individuals establish or re-establish interpersonal relationships and social involvements (music "draws out" autistic children, for example); 2) it can help individuals develop self-esteem through self-actualization (i.e., the acquisition of skills); 3) the rhythmic structure of music can energize and bring order (especially in work with the mentally retarded and the physically disabled who need a sense of structure and organization in their confused and often chaotic private worlds). Music therapy is also used--especially in Europe--for group, couple or individual therapy with more "normal" individuals or with individuals of "normal" intelligence. Music therapy is used in the dentist's chair and in hospitals to relieve the fear and anxiety of patients and to reduce the need for heavy sedation in the operating room. It is used in helping patients deal with pain and as a preparation for "painless" childbirth. It is used on the psychiatrist's couch and in the treatment of such illnesses as insomnia and alcoholism. Music therapy is used in combination with relaxation techniques and visualization exercises, with Sophrology and the Terpnos Logos (or special voice quality) and with Autogenic training.

Whether considered as a social art or a means to self-development, music and music therapy can take two forms: passively listening to music (audition) or actively engaging in a group that is making music (participation). In modern music therapy there are, as in ancient Greece, both active methods and passive methods.

Active methods include playing an instrument but also rhythmic games and physical activity to music. As opposed to learning to play a musical instrument, "instant music" or "collective improvisation" requires no specific musical ability or training. In such forms of music therapy, each patient chooses his or her own instrument and, with neither conductor nor score (but sometimes with the therapist as guide) plays randomly. Music is used as a means of communication. Playing is spontaneous. For the patient, free improvisation may be a new musical experience unrelated to any past failures; the autistic or psychotic individual, for example, can succeed in expressing himself nonverbally. In "active methods" or "instant music," "pre-band" instruments are normally used, i.e., drums, tambourines, wood-tone instruments (wood blocks), bells and cymbals, simple wind instruments (such as the recorder), simple string instruments (even the guitar). Those instruments that click, ring, chime, clang and jingle teach sound discrimination and a sense of rhythm, in addition to providing a means of self-expression and non-verbal communication with others.

Passive methods involve listening to live or recorded music, often in combination with relaxation techniques and normally followed by group discussion. Very often the aim here is relief from psychological stress and/or the realization of emotional control. In Europe (particularly in Switzerland), research as been conducted to find out which forms of music are best suited to relaxation and concentration (or focusing). For example, romantic music does not seem particularly appropriate for relaxation; it tends to arouse personal associations and to create tensions. Baroque music, on the other hand, is structured and reassuring.

In recent years a good deal of attention has been devoted in the United States to music itself as a reinforcement for desirable behavior. Both "contingent music" (playing music as a "reward") and "contingent interruption" of music (when behavior is "maladjustive") have been the focus of many studies. American investigators report having used contingent or background music to improve mathematics skills and to increase reading participation.

Insofar as background music is concerned, there are a number of important elements to be considered: rhythm, melody, harmony, instrumentation. While the effects of rhythm can generally be measured objectively, melody and harmony tend to be evaluated more subjectively. Researchers in France, however, have evaluated the effects of all these elements on music therapy patients.

Rhythm has been scientifically proved to have either a stimulating or depressing influence on the rhythmic systems of the body: blood circulation, breathing, heart rate. The physical or physiological response to music is created by rhythm; however, this fundamental element of music also touches the emotions. Babies put into nurseries where a heart beat sounds over the loudspeaker system have been found to sleep longer and grow faster than babies in a silent nursery. Rhythmic drumming has been used to send warriors raging into battle or to put dancers into a state of ecstasy. A lively rhythm is useful for breaking tension and dance rhythms generally have a liberating impact. (Rock music, however, fatigues the nervous system). The subtle rhythms of classical Indian ragas played on the sitar appeal to the intellect and have a soothing effect. The lullaby sung by the mother has an especially reassuring quality. The relationship between music rhythm and the natural rhythms and responses of the body makes music a logical ordering instrument for certain kinds of problems, especially those in which coordination needs improvement. Music therapists like E. Thayer Gaston believe that the energizing and ordering function of rhythm is the most important one in music therapy for the mentally retarded and the physically handicapped.

It is commonly noted that the musical time unit in almost all cultures appears to be a standard that is roughly equal to the human heartbeat (i.e., between 70 and 80 beats a minute). In Indian philosophy, a beat of 60 to the minute is considered to be the ideal beat for meditation. Possibly it is the 1:4 ratio of breathing to heart rate that makes quadruple time the most useful for a steadying effect. Triple, quintuple and septuple times, on the other hand, promote a feeling of restless energy.

In music therapy, it has been found that a rhythm of 60 to 80 beats a minute produces a feeling of serenity; a beat of 100 to 150 is invigorating and joyful. Slowing down the tempo leads to calm and tranquillity and relaxation music has a rhythm of about 60 beats to the minute. (In addition to a slow, regular rhythm, relaxation music should have even dynamics and no dissonance). In France, a group music therapy session (which involves relaxation techniques and postures as well as rhythmic breathing) has the following phases: 1) "countdown" (music with a moderate beat of 60 to 80); 2) relaxation (music with a beat of 60 or less); 3) "coming out" (a fast or *allegro* movement of more than 100 beats a minute.

Harmony has been called the "heart of music." Simple harmonies and even dynamics are characteristic of music that tends to reduce physical activity and to enhance contemplation. Dissonant or complex harmonies and abrupt dynamic changes tend to increase or stimulate physical activity and to reduce mental activity. The proportionally spaced harmonies of the major common chords soothe and strengthen while the minor chords cause sorrow and yearning. Consonance is said to represent order, equilibrium and tranquillity, while dissonance produces worry, torment and agitation. Major modes create happiness and lightness while minor modes provoke melancholy. The harmonies of baroque and classical music are described as consonant and reassuring and those of the romantic period as complex and/or engulfing; contemporary music, which tends to be very dissonant, evokes anguish and chaos.

Melody is said to convey the real meaning of music. On the one hand, melody appeals to the emotions: an ascending movement, for example, evokes joy, gaiety and/or serenity while a descending movement creates a feeling of dignity and solemnity. Melody also appeals to the intellect; the flow of the notes passing in time must be held in the mind if it is to follow the melodic pattern. Tension and relaxation of pitch in melody also have an effect on the physical body of singer, player and listener. The melodies of contemporary music are characterized as intellectual and those of the romantic period as sentimental. Baroque melodies are sustained and structured.

In addition to such considerations as rhythm, harmony and melody, the choice of musical instruments also plays an important role in music therapy. The flute, for example, has a pastoral quality; the organ is associated with religion; the accordion, at least in Europe, evokes a "popular" (i.e., workers') milieu. The xylophone calms the aggressive patient; the flute and harp open up the introverted. The cello is sonorous and expressive while the trumpet is stimulating and arousing. According to the research conducted by Dr. Alfred Tomatis and his associates, the violin (which is the instrument with the most high frequencies) is the most soothing of all the instruments.

The elements of music that make it appropriate for use in the treatment of disorders also make it suitable for use in special education. Developmental music therapy, for example, is a "psychoeducational" model that has been designed for use with emotionally disturbed children in learning situations. Bringing together assumptions from Piaget's theories of child development, behaviorist psychology and special education methodologies, developmental music therapy identifies four curriculum areas (behavior, communication, socialization, academics) and four stages of development (responding to music with pleasure, responding to music with success, learning music skills for successful group participation and investing in group music processes). A fifth stage has also been identified: applying individual and group music skills in new situations. Children are grouped by their developmental stage in each area, rather than by chronological age. The approach rests on the principle of building on children's strengths and it is assumed that even "disturbed" children can function normally in certain contexts and at certain times.

In addition to special education, music therapy is also appropriate for the education of the "normal" child. Elements of active and passive methods in music therapy have been incorporated into a number of learning systems, in particular, the Suzuki Approach, the Tomatis Method and Suggestopedia. These three methods differ in their utilization of "music therapy," but all feature music making, on the one hand, and listening to music, on the other.

The Talent Education Method of Shinichi Suzuki, which had its origins in Japan some 40 years ago, is principally used for the teaching of music in North America, although it has been used in Japan to teach academic subjects. The Suzuki approach to music education begins with listening--ideally from the moment of the child's birth. A short masterpiece (or movement from a masterpiece) by one of the great composers is selected and that one selection is played every day for the baby. Baroque compositions are often used because of their clear rhythmic structures, uncomplicated harmonies and sustained melodies. After about five months, the baby will have "learned" (i.e., absorbed) the selection; at that point, another selection is added. The baby now hears two pieces every day. Following this pattern or musical progression, the baby will grow into a child who is sensitive to music. Suzuki stresses that, in addition to soothing the baby in the manner of a lullaby, listening to good music motivates the child to want to play that music later on, develops his musical memory and improves his future ability to play by ear.

Once the child's ear for music has been developed through repetitive listening, he or she is ready to begin to learn to play a given instrument (violin, piano or cello, for example). Suzuki pupils usually begin lessons at age three or four. In the lessons, tone production and posture are emphasized; rhythmic games are used; relaxation, breathing and visualization exercises may be included. Once the child has begun his music lessons (both private and group), home practice plays an important role and regular practice is an important part of the Suzuki method. Listening continues to be emphasized, however. The piece which is to be learned should always be played beforehand to the pupil every day by means of good quality records or tape recordings; the piece is memorized in advance and then the child is taught to play it. The pupil should also continue to listen to the appropriate records or tapes while he is learning the piece.

Tape recordings of the music are made with several repetitions on the tape or use is made of "endless" cassettes that repeat continuously. While listening to the music being played (or repeated), the child can be engaged in some other activity (games, drawing, for example). Through indirect attention, the child easily absorbs the musical sounds at an unconscious level. Some parents prefer to play recordings as the child lies in bed at night. Corresponding to hypnopedia, the child absorbs the musical structures while he is falling asleep or while he is in a state of light sleep.

In the 1950s in France, Dr. Alfred Tomatis began his research into the ear and the voice and subsequently developed his own unique system for treating dyslexia and communication problems, on the one hand, and teaching basic elements of foreign languages, on the other. The Tomatis program consists of two major parts: the passive phase (listening training) during which the child listens to music and sounds, and the active phase (audio-vocal training) which requires the subject's active and vocal participation. (When used, music making in the active phase takes the form of singing). Employed throughout much of the program is the special electronic equipment designed by Tomatis and, in particular, the "electronic ear," a special machine placed between the earphones and the tape recorder which retrains the subject's ear to hear language sounds properly.

During the first (or passive) phase, the child receives auditory stimulation through earphones which include a vibrating device placed on the forehead. Music is used in the initial stages of a "retour sonique"--a return to the high-frequency sound conditions of the mother's womb. The child listens to Mozart's symphonies or violin concerti--

for Tomatis, Mozart is the universal composer, although such baroque composers as Vivaldi are also used. At first the music is unfiltered but, as the 35-minute sessions proceed, the music becomes more and more filtered so that, finally, only those frequencies above 8,000 Herz are present in the musical piece.

With session 15, the child begins listening to a recording of the mother's voice, at first in a very filtered form (i.e., only those frequencies above 8,000 Herz are present). The mother's voice is perceived as one perceived it in the womb. From sessions 15 through 50, in the various stages of what is called an "accouchement sonique" (sonic birth), the mother's voice becomes less filtered as the missing frequencies are gradually reintroduced. In the same way as a baby progressively hears during the 10 days after birth in his evolution from the liquid world of the foetal ear to the sound world of air, one begins to hear a thin voice, then a more complete voice and finally the full voice of the mother reading a story. The mother undergoes voice training, if necessary, in order to learn to position her voice correctly and the reading proper is done under the "electronic ear" to improve the timbre of the voice.

The purpose of the active training phase in the Tomatis program is to help the child use his new listening ability properly. During this phase, the child is asked to listen to tapes of different kinds (songs, words, sentences, for example) while under the "electronic ear" and to reproduce vocally what he hears into a microphone. Singing is particularly favored as a memory-training and linguistic-structuring device. (Music therapists have found that music is highly effective in helping retarded children master the developmental stages in the learning of speech in a non-threatening and pleasurable way. Vocabulary is effectively expanded through the singing of songs; memorization of data is better achieved in connection with singing than with purely verbal means).

So that the child can hear his or her own voice correctly during the active phase, the sounds he or she reproduces are automatically adjusted by the electronic equipment. During the audio-vocal training period, a balance system permits the sounds to be focused progressively on the right ear (i.e., the left hemisphere of the brain) which Tomatis believes is the key to proper listening. The child is encouraged to read aloud, both during the sessions and at home. This active phase continues through a series of sessions and control interviews until a combination of the results of the listening tests, observations, reading tests and interviews signals an end to the program.

As set up at the Institute of Suggestology in Sofia, Bulgaria in the late 1960s and early 1970s by Dr. Georgi Lozanov, Aleko Novakov and colleagues, the original suggestopedic language class encompassed three forms of language learning: activity, conscious analysis and unconscious assimilation. A four-hour class in Suggestopedia consisted, essentially, of three parts: 1) review of the previous lesson(s) in the form of conversational exchange, songs, games, story-telling, plays and sketches; 2) presentation of new material, with accompanying grammar and translation, in the form of dialogues and situations based on real life; 3) the séance or yogic relaxation session, during which the material was "reinforced" by a number of techniques, including: coordination of sound and image; various intonations in the repetition of a given phrase; a background of calm, pleasant music; an artistic reading of the text in a soft, soothing voice. As in the Tomatis program, music-making in Suggestopedia took (or takes) the form of singing; foreign language songs were (are) frequently used in part one of the language class. It is the séance, however, which illustrates to what extent elements of passive methods in music therapy can be effectively incorporated into a learning system.

Originally based on two forms of yoga concentration (outer/inner), the suggestopedic séance was divided into two parts, active and passive, with active or outward concentration on the material preceding the rest and relaxation of passive meditation on the text. During the active session, the three words or phrases of each group in the language dialogue were presented together, each with a different intonation or voice level: declarative, whisper, loud command. The three intonations correspond to three forms of yoga suggestion. During the active session, the students looked at the dialogue on the printed page and repeated to themselves (using the technique of inner speech) the foreign-language words and phrases.

The dialogues were originally arranged on the page in groups of three, with five groups of three phrases or sentence fragments to a page. The translation of each word-group was provided in a column at the right of the page. All phrases were simple and straightforward and, as in Soviet sleep-learning programs, each phrase presented one information unit. Since, during the original séance, each word-group was read during a time span of eight seconds and three phrases were read in 24 seconds, each page of dialogue involved two minutes and each ten-page dialogue 20 minutes of reading. Twenty minutes is considered to be the ideal meditation period in yoga.

The original concert session (or passive part of the séance) was divided into three parts: 1) a two-minute introduction which served as a "countdown" (the opening Sarabande from Bach's Goldberg Variations played on the harpsichord with a metronome speed of 70 to 80, the beat of the normal human pulse); 2) a series of slow movements from baroque concerti grossi for stringed instruments, lasting some twenty minutes, over which the teacher acted out the lesson dialogue with an emotional or artistic intonation and during which the students, with eyes closed, meditated on, or visualized the text; 3) an allegro flute excerpt in a major key from baroque music, lasting some two minutes, which brought the students out of their deeply relaxed state. For the concert part of the séance, the students originally adopted a posture of relaxation (the alternate Savasana posture) and engaged in deep and rhythmic group breathing to a count of eight that accorded with the teacher's reading of the language material and with the beat of the baroque slow movements in the background.

The original suggestopedic concert session combined visualization and relaxation with a three-part session in music therapy: 1) "count-down" (music with a moderate beat); 2) relaxation (music with a slow-moving beat); 3 "coming out" (music with a fast rhythm). The slow movements used in part two of the original concert, excerpted from the concerti grossi of Bach, Corelli, Handel, Telemann and Vivaldi, have by definition a rhythm of 60 beats to the minute, the ideal beat for meditation and relaxation. A sustained melody in the string section and a steady bass accompaniment are other important features of baroque slow movements selected for the original "concert."

As in music therapy, instruments were carefully chosen for the suggestopedic concert session. The harpsichord (used in part one) is considered an ideal instrument for inducing a state of relaxation because of its even dynamics. The violin is the most soothing instrument because of its high frequencies (stringed instruments, violins in particular, were used to provide background music for the reading of the lesson dialogue). The flute (used in part three) has a pastoral quality but is also more stimulating than the violin.

In the mid-1970s, the suggestopedic séance underwent modifications and comprised two concerts as background for the reading of language materials: 1) romantic or classical and 2) baroque. As in ancient Greece, two forms of music were used: one appealing more to the emotions, one appealing more to the intellect. It could be said that the revised séance also bears considerable resemblance to those sessions of modern music therapy in which musical selections are chosen to provoke first arousal, then security.

Because of its elements of harmony, melody and rhythm, music can be effectively used for both therapeutic and pedagogical purposes. Making music may be used as a means of nonverbal communication in therapy; singing is an effective device for memorizing academic materials. Listening to music provides relief from psychological stress; background music, if properly chosen, can be used to promote absorption of materials in the classroom. Since music facilitates learning and makes it more pleasant in a number of available learning systems, it can be said, in conclusion, that music therapy can be of real benefit in education.

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La thérapie musicale et l'éducation.

On dit que l'emploi de la musique pour des fins thérapeutiques spécifiques est un phénomène (moderne); néanmoins on peut affirmer que la thérapie musicale remonte aux temps préhistoriques. On sait que les Anciens--les Égyptiens et les Grecs, par exemple--employèrent la musique pour soigner des problèmes physiques et mentaux. Dans l'Europe occidentale pendant la Renaissance, certains médecins apprécièrent les effets de la musique sur le corps et l'esprit; au dix-huitième siècle, un nombre croissant de médecins ont observé les effets purement physiologiques de la musique. C'était seulement au moment de la Deuxième guerre mondiale qu'on a jeté des bases scientifiques dans ce domaine.

La thérapie musicale peu prendre deux formes: l'écoute passive ou la participation active dans un groupe qui fait de la musique. Tandis que les méthodes actives donnent plus de possibilités de création pour les participants parce qu'elles comprennent des activités comme chanter, jouer des instruments, et jouer aux jeux rythmiques, les méthodes passives ou d'écoute sont plus propres aux fins thérapeutiques ou pédagogiques.

Quelques éléments importants qu'il faut considérer dans l'emploi de la musique pour l'écoute comprennent: le rythme, la mélodie, l'harmonie et l'instrumentation. Le rythme a des effets physiologiques mesurables sur le corps, particulièrement sur la respiration, le pouls et les battements du coeur. L'harmonie, la mélodie, et l'instrumentation produisent des effets psychologiques sur l'humeur et le caractère.

Outre l'éducation des enfants handicapés, la thérapie musical est aussi convenable pour l'éducation de l'enfant normal. Des éléments des méthodes actives et passives de la thérapie musicale ont été incorporés dans un nombre de systèmes d'apprentissage, en particulier dans la méthode Suzuki, la méthode Tomatis et la Suggestopédie. Ces trois méthodes diffèrent dans leurs usage de la thérapie musicale, mais toutes comportent les activités musicales et l'écoute.

Puisque la musique facilite l'apprentissage et la rend plus agréable, on peut dire que la thérapie musicale peut avoir des bienfaits réels dans l'education.

Musiktherapie und Erziehung.

Der Begrauch von Musik für besondere Therapeutische Zwecke gilt als ein "modernes" Phänomen; man darf jedoch sagen, dass die Musiktherapie bis in Prähistorische Zeiten zurückgeht. Es ist bekannt, dass die alten Griechen und Römer, zum Beispiel, Musik in der Behandlung von physischen und geistigen Problemen angewandt haben. Während der Renaissance in Westeuropa wussten die Ärzte die Wirkung von Musik auf den Körper und den Geist zu schätzen;

im 18. Jahrhundert nahmen immer mehr Ärzte die rein physiologischen Wirkungen von Musik zur Kenntnis und erforschten sie. Erst im Zweiten Weltkrieg gewann dieses Fachgebiet eine Forschungsbasis. Musiktherapie kann zwei Formen haben: das passive Zuhören von Musik; oder ein aktives Teilnehmen an einer musizierenden Gruppe. Obwohl aktive Methoden schöpferischer für die Teilnehmer sind, da sie solche Tätigkeiten wie Singen, das Spielen von Instrumenten, und das rhythmische Spielen beinhalten, eignen sich die passiven Methoden, die das Zuhören einschliessen, besser für die therapeutischen und/oder pädagogischen Zwecke. Wichtige Bestandteile, die man im Gebrauch von Musik beim Zuhören betrachten könnte, sind: Rhythmus, Melodie, Harmonie, und Instrumentenwahl. Rhythmus hat messbare physiologische Wirkungen auf den Körper, insbesondere auf das Atmen und den Puls. Harmonie, Melodie und Instrumentenwahl zeigen psychologische Wirkungen auf die Stimmung und auf die Persönlichkeit. Neben dem Sonderschulunterricht ist Musiktherapie auch für die Erziehung des "normalen" Kindes geeignet. Bestandteile von aktiven und passiven Methoden der Musiktherapie sind in einer Anzahl von Lernsystemen eingebaut, besonders in die Suzuki Methode, die Tomatis Methode, und Suggestopädie. Diese drei Methoden sind in ihrer Anwendung von "Musiktherapie" verschieden, aber alle drei spezialisieren sich auf Musizieren, einerseits, oder auf das Zuhören von Musik, andererseits. Da Musik das Lernen fördert, und da sie es angenehmer macht, kann man sagen, dass Musiktherapie mit grossem Nutzen verwendet werden kann.

Terapía musical y educación.

Se dice que la utilización de música para fines específicamente terapéuticas es un fenómeno "moderno": sin embargo, se puede decir que terapia musical existe desde tiempos prehistóricos. Se sabe que los antiguos históricos, los egipcios y los griegos, por ejemplo, utilizaron música en el tratamiento de problemas físicos y mentales. En Europa Occidental durante el Renacimento, médicos apreciaban los efectos de música en cuerpo y mente. En el siglo XVIII, un número creciente de médicos notaron e investigaron los efectos puramente fisiológicos de música. Sin embargo, no fue hasta la segunda guerra mundial que se dio una base investigativa al campo.

Terapía musical puede adoptar dos formas: escuchando música pasivamente o tomando parte activa en un grupo que produce música. Aunque métodos activos son claramente mas creativos para los participantes, incluyendo activadades como el canto, el tocar instrumentos y juegos rítmicos, métodos pasivos (que implican el escuchar) son frecuentemente mas apropiados para fines terapéuticos y/o pedagógicos.

Elementos importantes para considerar en el uso de música para audición incluyen: ritmo, melodía, armonía e

instrumentación. Ritmo tiene efectos fisiológicos medibles en el cuerpo, en particular, en respiración, pulso, y paso del corazón. Armonía, melodía e instrumentación producen efectos psicológicos en humor y personalidad.

Además de educación especial, terapia musical también es apropiada para la educación de niños "normales." Elementos de métodos activos y pasivos en terapia musical se han incorporado en numerosos sistemas de aprendizaje, en particular, el sistema Suzuki, el método Tomatis y Sugestopedia. Estos tres métodos se diferencian en su utilización de "terapia musical" pero todos incluyen la producción de música por un lado, y el escuchar música por otro.

Como música facilita aprendizaje y lo hace mas agradable, se puede decir que terapia musical puede ser de gran beneficio en enseñanza.

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The Effect of Background Music on Learning Words*

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Abstract. The purpose of this experimental study was to investigate the influence of background music on the learning and memory of vocabulary words away from SALT classroom learning. The literature reviewed claimed that baroque and classical music are effective in helping students learn classroom material. This study investigated under controlled laboratory, rather than classroom, conditions these seven types of music: baroque, classical, dissonant, Japanese, march, meditative, rock and no music as a control, for their facilitation with students learning vocabulary words. A mixed analysis of variance design was used with between subject factors of type of music, music selection replication, suggestion, order of lists learned and subject gender. The two cognitive dependent variables or criteria were acquisition and retention of the meaning of 25 vocabulary words per list, and four affective criteria were pleasantness, alertness, concentration and liking-music ratings while studying the lists. Subjects were 256 college students from introductory psychology classes who randomly assigned themselves to treatments without knowing in advance to what type of music they would be exposed.

Neither the acquisition or retention scores for vocabulary learning showed any effect of music type, contrary to previous research. However, there were significant differences among the 16 different music selections for acquisition scores. The two music selections used for classical, dissonant and Japanese music produced rather disparate results on vocabulary learning. The remaining types of music were rather consistent in their effects on acquisition, but as a group were not significantly different from learning in the control treatment groups without any music.

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Type of music and music selection did significantly effect the concentration and liking-music ratings. But these large differences did not influence the associated vocabulary learning with correlation coefficients between the cognitive and affective criteria ranging from 0.1 to 0.2, clearly of trivial influence. This was corroborated by a factor analysis.

In summary, this study showed no support for previous contentions that certain types of background music facilitate verbal learning more effectively than no music while learning. Individual music selections, however, did influence verbal learning, sometimes in a negative way to interfere with learning, and with large individual differences between music selections. Thus generalizations about types of background music are risky, and must be based on empirical research. Speculations about why this research failed to replicate previous findings were made.

Purpose

The purpose of this research was to investigate the effects of eight different types of background music on vocabulary learning. The effect of type of music was evaluated in a context of other variables such as replication or selection of music, sex of subject, suggestion, easiness of list and practice. It is important to note that this was not done in the context of a SALT class.

Introduction

Lozanov (1978) made the statement that when foreign language vocabulary was reviewed with classical music, it was possible to learn an average of 0.6 words per minute. In contrast, when the material had been reviewed with baroque music, 1.2 words per minute were learned by his student subjects. Bordon and Schuster (1976) reported that the use of baroque music by J. S. Bach and Vivaldi resulted in a 25% improvement in the acquisition of paired associate Spanish words compared to when this music was absent. On a retention test 6 weeks later, retention scores were 22% better when music had been used than when not. In a study of the psychological and physiological effects of music, Blanchard (1979) reported that both classical music, and rock and role music significantly enhanced the final exam scores of college students compared with the control condition where no music had been presented to students during the exam. Schuster and Mouzon (1982) reported that baroque music played during learning and during the quiz over vocabulary paired associates, that acquisition scores were 24% higher and retention scores were 28% higher than for scores for students in the control condition without music. Similarly, classical music played during learning resulted in acquisition scores of 12% higher, and also during the quiz, resulted in retention scores 15% higher than those of the control group without music. Schuster and Bordon reported that their results with classical music contradicted Blanchard's data for classical music played during a final exam. Redmond (1984) reported on the influence of music on human behavior from a musician's point of view. She noted that the effects of music were important due to entrainment, individual response patterns, vibration and the iso-principle (gradually shifting the type of music in the desired affective direction). The responses to music of a given type may be found in the Music Psychology Index by Eagle (1976-1984). Hodges (1980) discussed the relationship between music and other behavior including physiological responses.

On the basis of the literature review, it was expected that music of different types certainly would enhance the learning of paired vocabulary associates as used in this study. We hoped to corroborate what Lozanov had reported, that baroque music would be better than no music while students were studying material to be learned. Because of the discrepancy between Blanchard's work and our previous work, we didn't know what to expect for classical music or the other types of music. Music of quite a few types has been used recently in an accelerative learning context, and so we felt that several types of music as background should be included for evaluating their facilitation, if any, on vocabulary learning.

Several other independent variables reported in the literature have been reported to influence learning of paired associates. The difficulty of the material to learn is important, as reported by Crawford (1970), Schuster et al. (1980) and Straughn et al. (1969). Suggestion is also an important variable in paired associates learning as reported by Lozanov (1978), Schuster et al. (1980), and Schuster and Mouzon (1982). Since we investigated the effects of music in a context of variables known to influence vocabulary learning, we list here our major hypotheses regarding the main effects of the 7 independent variables used in this study.

1. We predicted that the different types of music would facilitate or interfere with paired associate learning to different extents. Specifically, we predicted that as reported previously, baroque music would facilitate verbal learning, whereas the effects of the other types of music would vary.

2. We predicted that female subjects would learn vocabulary words somewhat better than male subjects as is typical in the literature.

3. We predicted that the two different musical selections or replications of each type of music would have the same effect as the other, if any.

4. We hypothesized that the effect of suggestion would produce higher learning scores when it was suggested that learning would be easy, than when it would be hard.

5. We hypothesized that vocabulary lists with words randomly selected from an easy pool would be learned with significantly higher scores than lists developed from a pool of hard words.

6. We hypothesized that subjects would improve with practice while listening to a given type of music, that is, they would learn significantly more words in the last two lists than in their first two lists.

7. We predicted that the order in which the subjects took the vocabulary lists would have no effect, that is, the scores would be the same whether the subjects took the vocabulary lists in a one sequence or the reverse.

Method

We used a mixed model analysis of variance (ANOVA) design. There were seven independent variables, one of which was a control variable (order), two covariates and two cognitive independent variables and four affective independent variables. Refer to Table 1 for an overall perspective of the design of this study.

Explanation of Independent Variables

Between Subjects

1. Music type. While learning the vocabulary words and taking the quiz over them, students were exposed to one of 8 types of music: baroque, classical, control (no music), dissonant, Japanese, march, meditative, or rock. See Table 2 for titles.

2. Replication of music. One example or selection of a given type of music was played for half of the subjects and a second sample for the other half.

3. Suggestion. Half of the subjects in each treatment cell had written suggestions that learning would be fun and pleasant and that they should relax while listening to the music and learning the lists. The other half of the subjects at random had hard suggestions.

Table 1

List of Variables

Independent Variables

Between subjects

1. M, Music type: 1-baroque, 2-classical, 3-control, 4-dissonant, 5-Japanese, 6-march, 7-meditative, 8-rock.
2. R, Music selection rep: 1-I, first rep, 2-II, second replication.
3. S, Suggestion: 1-hard, 2-easy.
4. O, Order of lists taken: 1=27-37-38-28, 2=38-28-27-37.
5. G, Gender of subject: 1-female, 2-male.

Within subjects

6. H, Hardness of list: 1=List 27 or 28, 2=List 37 or 38.
7. Q, Sequence: 1-first 2 lists taken, 2-last 2 lists.

Covariates

1. F, Favorite music: (1-8 like Music above), 9-pop, easy rock, 0-other.
2. W, Listening to music while studying: 1=never...5=half... 9=always.
3. ACQ20, Acquisition score on Quiz 20A (pretest): 0-25 possible range.

Dependent Variables

1. ACQ, Acquisition score: 0-25 range.
2. RET, Retention score: 0-25 range.
3. P, Pleasantness rating: 1=unpleasant...5=intermed... 9=pleasant.
4. A, Alertness rating: 1=tired...5=intermed...9=pleasant.
5. L, Liking music rating: 1=disliked...5=intermed...9-liked.
6. C, Concentration rating: 1=poor...5=intermed...9=good.

4. List control. One group of subjects took the vocabulary lists in one sequence while the other half of the subjects took them in the reverse sequence to control for minor differences among lists.

5. Sex of subjects. Half of the subjects were male and half female in each treatment cell. There were eight subjects of each sex in each treatment cell. With 16 subjects per treatment cell and 8 music types by 2 reps of music (16 different treatment cells), there were 256 subjects total in the experiment. To ensure getting 8 males and 8 females per treatment cell who met exactly the counterbalancing conditions for suggestion and list sequence control, we attempted to collect data on 12 subjects of each sex per cell. To ensure that 12 subjects per sex would show up initially, the sign-up sheets had space for 15 subjects per sex. Subjects whose data were incomplete had their protocols discarded, and if we yet had more than 8 subjects per sex per treatment cell, we randomly discarded one of the potentially usable subject's data.

Within Subjects

6. Test easiness. Subjects learned one easy list and one hard list per half session with the order counterbalanced over subjects within group. Easiness had been determined in previous research, with easiness defined as easier than average.

7. Sequence. Subjects learned four lists altogether in one session in approximately one hour with a short break in the middle. The average of the first two lists taken was compared with the average of the last two lists taken to evaluate the practice effect, if any.

Covariates

1. Studying-while-listening-to-music rating. Subjects were asked to indicate their favorite type of music, if any, and to indicate how often they studied with this type of music playing on a scale, 1-9 range. Refer to Notice-to-Subjects in the Appendix.

2. Acquisition score on control test #20. Subjects as they entered the experimental room were first given List #20 to study. Their acquisition scores on this test without any music having been played formed a control for each subject's ability to learn unknown vocabulary words.

Dependent Variables

1. Acquisition score. The number of vocabulary words defined in writing from immediate recall minus the number

known beforehand, 0-25 possible range. The words were rare English words unknown to the author some years previously.

2. Retention score. The number of words correctly selected from a list one week later minus the number of words known before, 0-25 range.

3. Pleasantness rating during learning the list, 1-9 range.

4. Alertness rating during learning the list, 1-9 range.

5. Concentration rating during learning, 1-9 range.

6. Liking the music rating during learning, 1-9 range.

Procedure

The following is the protocol that the experimenters used in administering the experimental treatments to subjects during the spring and fall semesters 1983. The directions both for the first day and the second day exactly seven days later were covered along with the sequencing of subjects in the different experimental treatments.

Learning Words with Background Music

Day 1

Introduce yourself, give your name, state "This is experiment #10: Learning Vocabulary Words with Background Music." Pass out the 4x6 credit cards; have the subjects fill them out as completely as possible and turn them in; and check for completeness of information.

Pass out the prepared packets with the consent form and introduction as the cover sheet. Ask subjects to fill in their name, date and their phone number. Have them fill in your name also and the type and example of music to be used. Also ask them to fill in their favorite type of music, and to what extent they study with this music as background. (No music is playing yet.)

Make sure subjects read the instructions at the bottom of the cover sheet. Then repeat the directions orally about having to learn the common definitions of 25 words on the next page in 5 minutes. Then turn to the next page, List 20, saying, "Study these words for 5 minutes and learn their common definitions. After 5 minutes, I will stop and ask you to write the definitions of the words given in a different order." Start the stopwatch.

At the end of exactly 5 minutes of study time, say "Stop. Turn over the list packet just studied. Turn to the quiz packet and find Quiz 20, the first page on the quiz packet." Ask subjects to fill in their name code number (e.g., 7F or 4M) under Name/Code # (not their name), 'no music' under conditions, and today's date. After checking that subjects are done, say, "Now write the common definitions to the words you just studied. You will have as much time as you need, but you should finish in 3 to 5 minutes." As subjects are nearly finished, ask if anyone wants any more time, reminding them that most people are finished. Wait a minute.

Start the music designated for this group, and keep it playing throughout the rest of the session. Ask subjects to return to List 20 in the packet of lists (cover sheet on top). Say, "Turn to the next page of directions, and read them carefully." (This will be the initial suggestion page.) When everyone is finished, say, "Now turn to the next page, which is another page of new words. As before, you will have exactly 5 minutes to study and learn the definitions of these 25 words." Start the stopwatch. Keep the music playing.

After exactly 5 minutes, say, "Stop. Look at the list number in the upper left and remember this number. Turn your list booklet face down. Now pick up the quiz packet and turn to the numbered quiz for the list just studied. The quizzes are in numerical order in the packet. Everyone find the right number quiz? Fill in your Name/Code # first, then the type of music and sample number under Conditions (e.g., 'Baroque 2'), and today's date. Next circle numbers to indicate your Pleasantness and Alertness, etc., ratings. Also circle any words you knew before today. Now write the definitions for the words you just studied. No hurry, but you should finish in 3 to 5 minutes." After 3 to 5 minutes, encourage the stragglers to finish. Walk around; check that people have filled in the top line information requested and that they have circled four rating numbers. This is critical!

Repeat for the second list (ignoring List 20 as control). Then take a 5 to 10 minute break. Encourage people to stand up, stretch, get a drink, etc.

After the break, ask subjects to turn to the next page in the list packet, which will be the middle instruction sheet. Ask subjects to read over the mid-instructions, then do the third list on the next page, with 5 minutes for studying it. Then do its quiz. Finally, do the fourth list and quiz.

After all subjects are finished with the fourth and last quiz for the day, say firmly, "Come back next week, same day, same time, same place. You will not get full credit unless you do return. We will not be able to use your data unless you come back. Thank you, see you next week."

Day 2

Welcome people back. Music is going continuously, same type as for the first day. Pass out the posttest (Quiz B) packets with people's surname and name/code number written on the first sheet only. The first sheet will be Jumbled Words list L1 or L6. Say, "Each word here can be arranged to make a real English word. Some are easy, some are hard. You will have seven minutes to work on unscrambling all 10 words."

Start the stopwatch. After 7 minutes exactly, say, "Stop. Fill in the two ratings for Pleasantness and Alertness. Then turn to the next page. This is a second list of jumbled words for you to unscramble in the next 7 minutes." After 7 minutes, say, "Stop, fill in the ratings at the top. Next, turn to the next page. Here you have to recognize the correct definitions listed in the right column for the words you studied last week that are given in the left column. Your job is to match words and their definitions." Read the directions to the subjects that are given at the top of the first B quiz. Stress that they are to use all 25 numbers. Walk around the room checking that they do so, as indicated by scanning each sheet for only 5 blanks. Tell subjects, "You will have as much time as you need. When you finish with one list, go on to the next. There is no time limit, but you should finish in 10 to 15 minutes. Be sure you use all 25 numbers per quiz. Thank you."

Check that people have filled in 25 numbers per list (critical!), and fill out their 4x6 credit cards again appropriately. Thank people for participating, and ask them if they have any questions about the experiment. Then dismiss them.

List Packet Sequences (S=Suggestion, O=Order Code)

1. (S1O1): Cover, L20, S1 init, L27, L37, S1 mid, L38, L28
2. (S1O2): Cover, L20, S1 init, L38, L28, S1 mid, L27, L37
3. (S2O1): Cover, L20, S2 init, L27, L37, S2 mid, L38, L28
4. (S2O2): Cover, L20, S2 init, L38, L28, S2 mid, L27, L37

Quiz A Packet Sequence: Q20A, Q27A, Q28A, Q37A, Q38A

Quiz B Packet Sequences

I. (O1, Lists 1 & 3): L6, L1, Q27B, Q28B, Q37B, Q38B
II. (O2, Lists 2 & 4): L1, L6, Q27B, Q28B, Q37B, Q38B

These procedures had been screened by the Iowa State University Committee on the Use of Human Subjects in Research and approved.

The Notice to Subjects Form or packet cover sheet is shown in the Appendix.

See Table 2 for the list of music used.

Table 2

List of Music Used

Baroque	1.	Water Music by G. F. Handel, CMS Records, NY
	2.	Four Seasons by A. Vivaldi, N5-1070 Nonesuch Records, NY
Classical	1.	Concerto #5 in E-flat Major by Beethoven
	2.	Symphony #67 in F Major by Haydn
Control	1.	(No music)
Control	2.	(No music)
Dissonant	1.	Concord Sonata & Second Pianoforte Sonata by Charles Ives and performed by Aloys Kontarsky, Time Records
	2.	Piano Concerto by Arnold Schoenberg, played by Glenn Gould. Also his Violin Concerto, played by Israel Baker & Robert Craft with the CBC Symphony Orchestra, Columbia Records, LC#R67-3495
Japanese	1.	Japanese Flute; Hi tumi Schrabe Hachi Queshi, VCK-2039
	2.	Yasuragi O kimi ni; Akira ito
March	1.	The Heritage of John Phillip Sousa, Vol. 9, performed by the US Marine Band, directed by Lt. Col. Jack T. Kline, USMC.
	2.	Marches from Around the World, performed by the US Marine Band, directed by Lt. Col. Jack T. Kline, USMC.
Meditative	1.	Dreams of Immortality by David & Amanda Hughes, Vedic Research Institute, CA
	2.	Birds of Paradise by Georgia Kelly, Heru Records, CA
Rock	1.	Escape by Journey, Columbia Records
	2.	Marathon by Santana, Columbia Records, CBS, Inc.

* * * * *

Results

First we analyzed the control list number 20 data to determine whether students had randomly assigned themselves to the 16 different treatment groups. Students had randomly assigned themselves to the treatment cells on the basis of studying while listening to music (F=0.62, df=15/240, p>.05) so we didn't worry further about this possible covariate. Unfortunately students had not quite randomly assigned themselves to the 16 treatment cells on the basis of ability to learn, their control List No. 20 vocabulary scores (F=1.64, df=15/240, p=.06). In a later analysis we also discovered that there were marked differences in the Liking-music rating among the 16 groups (F=3.97, df=15/240, p<.001); on a 1-9 Likert scale the range was 2.45 to 5.89. Since a covariate must be continuous, we did not use the discrete Favorite-music variable as a covariate. Accordingly we utilized analyses of covariance to test the effects of the subject variables, using as covariates pretest #20 Acquisition scores, Liking-music ratings, separately and later together.

The Liking-music ratings were significantly different among the 16 cell treatments, (F=3.97, df=15/240, p<.001). The Liking-music ratings better than the control conditions and the control ratings were:

5.89 - Classical selection #1, Haydn's Symphony #67 in F Major
5.73 - Rock selection #2, Santana's Marathon
5.58 - Baroque selection #1, Handel's Water Music
5.16 - Rock selection #1, Journey's Escape
4.88 - Japanese selection #2, Yasuragi Okimi ni
4.86 - Control #1, no music
4.80 - Meditative selection #2, Hughes' Dreams of Mortality
4.78 - Control #2, no music

There were three groups of types of music significantly different from each other using the Studentized Neuman/Keuls test. There were six types of music in the first group (rock, classical, baroque, control, meditative, Japanese) that were significantly different from either march or dissonant types of music. The second group of music was significantly different only from rock on the high end and from dissonant music on the low end. The third group consisted of dissonant music which was the least liked of all. As a result, we considered using these Liking-music ratings as a covariate, but decided against it. These ratings were obtained simultaneously, not previously, with the other dependent variables.

Next we performed analyses of variance for the effects of the five between-subject factors on the two cognitive dependent variables. None of the between-subject factors significantly (p=.05) affected retention scores. However, there was a gender effect (F=4.26, df=1/164, p<.05), and as usual, women had significantly higher acquisition scores than men. Similarly there was a significant interaction (F=2.38, df=7/164, p<.05) between types of music and replication. This gave weight to investigating the sixteen different selections of music rather than eight types of music.

Major interest shifted from analyzing the eight types of music to the sixteen selections of music. See Tables 3 and 4. The results did not show any significant effect (p=.05) of music type on vocabulary acquisition, whether adjusted for pretest learning ability (Table 4) or not (Table 3). However, there were significant effects of music selection on these acquisition scores. But there was only some consistency as indicated by low rank differences between the two selections of a given music type. For example, reasonably consistent (rank differences of 4 or less) were the control (no music), meditative, march, baroque and rock selections. Inconsistent were the selections of Japanese, classical and dissonant music (rank differences of 10.5 or more) in Table 3.

Table 3

Average acquisition scores and ranks of the 16 music selections

Rank	No. Correct	Musical Selection	Rank Difference
1	16.77	Japanese-2	14
2	15.66	Classical-2	11.5
3	15.23	Dissonant-1	10.5
4	14.81	Control-2, No music	3
5	14.72	Meditative-2	4
6	13.59	March-2	2
7	13.56	Control-1, No music	3
8	13.38	March-1	2
9	13.16	Meditative-1	4
10	13.08	Rock-2	1
11	12.73	Rock-1	1
12	12.44	Baroque-1	4
13.5	12.14	Classical-1	11.5
13.5	12.14	Dissonant-2	10.5
15	11.78	Japanese-1	14
16	11.34	Baroque-2	4

Source	F	df	p
M	0.89	7/164	0.51
M*R	2.28	7/164	0.03*

When adjusted for pretest learning ability, about the same picture emerged (see Table 4). Consistent were control (no music), meditative, baroque, march, rock and classical selections in having rank differences of 5 or less. Inconsistent were dissonant and Japanese selections. Note that classical selections were inconsistent for raw acquisition scores (rank difference=11.5) but consistent for adjusted acquisition scores (difference=5).

Table 4

Ranks and average acquisition scores adjusted for pretest vs. the 16 musical selections

Rank	Adjusted No. Correct	Musical Selection	Rank Difference
1	17.50	Dissonant-1	13
2	17.34	Japanese-2	14
3	15.19	Control-2, No music	1
4	14.50	Control-1, No music	1
5	14.44	Meditative-2	1
6	14.16	Meditative-1	1
7	13.53	Baroque-2	5
8	13.47	Classical-2	5
9	12.56	March-1	1
10.5	12.25	March-2	1
10.5	12.25	Rock-2	4.5
12	11.31	Baroque-1	5
13	11.25	Classical-1	5
14	11.13	Dissonant-2	13
15	11.00	Rock-2	4.5
16	8.91	Japanese-1	14

Source	F	df	p
M	1.88	7/163	.075
M*R	4.70	7/163	.001***

There were significant effects for all four of the affective criteria (pleasantness, alertness, liking music, and concentration ratings) for the interaction between music type and replication (p<.05 for all four F tests). In addition music type significantly affected the liking music ratings as discussed earlier (F=5.68, df=7/164, p<.001). Interestingly enough, the concentration ratings were also strongly affected by the interaction between music type and rep, or the sixteen different musical selections (F=3.68, df=7/164, p<.001).

This next short table shows the better average concentration ratings for the sixteen different treatment cells by music selection. Note: Higher ratings are better.

Concentration Rating	Music selection
5.25	Haydn's Symphony #67 in F Major
5.09	Control #1, no music
5.08	Ives' Concord and Second Pianoforte Sonatas
5.06	Kelly's Birds of Paradise
5.00	Handel's Water Music
4.81	Japanese, Yasuragi Okimi ni
4.77	Control #2, no music
....	
3.00	Marine Band's Marches Around the World

It appears that rather than concentration's being favored by certain types of music that certain types of music interfere with concentration since the significantly worse pieces musically were marches. Seven music pieces in the top part of this short table were not significantly different than each other, including the two control group conditions of not having any music playing while learning the lists.

The previous analyses rather clearly pointed out that there were major differences in the subjects' reactions to the 16 selections of music rather than in the 8 types of music themselves.

In an attempt to ferret out other aspects of the effects of music on learning, we checked those few cases where the subject had marked the music heard as their favorite music. There were just fifteen such cases and the data for these 15 subjects were analyzed with analysis of variance. The results were insignificant also (F=0.26, df=1/254, p>.06). A similar effect held for retention (F=0.89, df=1/254, p>.34).

At the time the retention tests were administered one week after the learning tests for acquisition, two jumbled word lists had been administered to the subjects while listening to the same type of music as in the first session. Analyses of variance for the effects of music type, order of lists and gender was performed for the jumbled word list score. None of the main effects nor interactions were significant. The analysis was repeated to see if there was an effect of any of the 16 pieces of music on the jumbled word score. Again the results were clearly insignificant (F=1.15, df=15/240, p>.30).

Discussion

This study for the effects of music *type* on subjects' ability to learn words was rather disappointing. There was only a marginal trend for the music type to have affected acquisition learning scores. However, the music *selections* did affect acquisition scores. Baroque, march, meditative and rock selections were consistent in their effect, but were no different than control (no music).

In an attempt to ferret out further details, a factor analysis of all the data was performed. Used was the principle components factor analysis followed by a varimax rotation. Thirteen factors emerged with eigenvalues greater than one. The first factor very clearly was positive affect with very high loadings on alertness, pleasantness and concentration ratings for all four of the experimental tests plus the pretest of List #20. The second factor to emerge very clearly loaded only on just the five acquisition scores. The third factor very clearly was the liking for music rating as this rating for the four experimental lists loaded highest. The fourth factor was the affect on the jumbled words lists with the highest loadings for the alertness and pleasantness ratings while studying these lists. The sixth factor was the retention scores on the four experimental word lists. Factor nine was a minor pleasantness factor. Factors ten, eleven and twelve, while they had one or two high loadings, were not readily interpretable. A minor factor was #13 with high loadings on type of favorite music and studying while listening to music.

The cognitive factors (acquisition and retention) were distinct from the affective factors (pleasantness, alertness, concentration, and liking music ratings). Thus the factor analysis did not produce any additional enlightenment for what had happened in this study.

This study does not show any particular support for previous research cited in this report. This is disturbing and we wondered what might have happened. A purely speculative explanation is that we have observed changes in students in the last five to ten years at the university and we wonder if possibly students are changing. Perhaps their liking for music has changed, and their ability to profit by having this playing in the background has changed within the last few years. A report by the author may shed some light on this which we have called a cultural maturation factor (Schuster, M.L. & Schuster, D.H., 1984).

We investigated the influence of types of music as auditory background, and not as part of a SALT or suggestopedic class. Perhaps we should have investigated type of music in a classroom (instead of lab) setting with other

SALT variables present as Lozanov (1978) recommends. Perhaps he is correct in this case, but in many cases we have found it possible to verify the influence of SALT/suggestopedic variables in isolation under controlled laboratory conditions.

Perhaps our choices of music selections were inappropriate in some cases. The baroque and classical (romantic) selections came from Lozanov (1978) while an ISU music major selected the others. The acquisition and retention rankings in Table 3 and 4 show considerable disparity in rankings between the two replications of a given type of music regardless of who had selected them. Perhaps we should have screened several music selections first, and then used the two with similar affective ratings.

Finally, type of music should be evaluated in a SALT or suggestopedic class setting as Lozanov (1978) recommends. We evaluated it as background while studying instead.

What did we learn from this study? The choice of which music to use as background or in a SALT classroom is a complex issue. We suggest the individual teacher evaluate which music works best in his/her SALT classroom, including Lozanov's recommendations. Meanwhile, research continues.

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Appendix

S____ O____ Code #:________

Notice to Subjects:

The purpose of this study is to investigate the effects of different types of music on learning vocabulary words. Previous research has shown that certain music in some cases may help learning. Accordingly, you will hear classical, baroque, or no music, or some other music while learning vocabulary lists. With your help, the results of this study may help people to learn better and more efficiently than is presently the case. You are being asked to be here for an hour to an hour and a half to learn five vocabulary lists. Posttests which take about 30-45 minutes will be given exactly 7 days later. Your total time involvement over these two days is about 1-1/2 to 2 hours.

You may leave at any time during this study. You will earn credit for each session you attend, but to earn full credit, you must complete all sessions, including the posttest one week later as scheduled. We urge you to attend all sessions because we will not be able to use your data unless you do complete all sessions. Your data will be coded to insure confidentiality; your name will not appear on our data sheets. Do you have any questions? If so, let me answer them.

I have read and understand the above information, and hereby want to participate in this research study.

PRINT your name__________________signed______________
Date__________Class & Section__________Instructor__________
Time_________Your phone number______________Sex_______
Your favorite type of music while studying or working:_____
____

Circle a number appropriately to indicate how often you study with your favorite music playing:

1	2	3	4	5	6	7	8	9
Never		Sometimes		Half		Usually		Always

Instructions

1. Fill out the small 4x6 card ("I am enrolled in...") and turn it in. 2. Do not turn the page yet! When everyone is ready, the experimenter will ask you to turn to the next page (List 20) and study it for exactly five (5) minutes. Your task is to learn the common definition on the right for each rare word on the left. If a word is fuzzy or poorly printed, raise your hand and I will spell it for you. Do not write on the vocabulary list nor talk to your neighbor.

You may write on a separate sheet of paper if you like. At the end of the study period of five minutes, the experimenter will ask you to turn to Quiz 20A and write the common definitions for the rare words given in a different order. Any questions?

*** *** ***

L'effet de la musique de fond sur l'apprentissage des mots.

Cette étude expérimentale avait pour but l'étude de l'influence d'une musique de fond sur l'apprentissage des mots et la mémoire pour les mots en dehors de la classe suggestopédique. Dans les recherches antérieures, on avait prétendu que la musique baroque ou classique était efficace pour aider les étudiants á apprendre les matiéres scolaires. L'étude présente est une enquôte, sous des conditions de contrôle au laboratoire plutôt que dans la salle de classe, sur l'usage de sept sortes de musique: baroque, classique, dissonante, japonaise, militaire, méditative, et rock et de leur aptitude à faciliter l'apprentissage des mots de vocabulaire par des étudiants. Il y avait aussi un groupe de contrôle sans musique. On a employé une analyse mixte de variance avec les facteurs entre sujets de sorte de musique, réplication de sélection de musique, suggestion, ordre de l'apprentissage des listes, et sexe des sujets. Les deux variables dépendantes cognitives furent l'acquisition et la mémoire pour les sens des mots sur des listes de 25 mots chacune, et les quatre variables dépendantes affectives furent l'agrément senti, la promptitude, la concentration, et le degré d'amour pour la musique de la part du sujet en train d'étudier les listes. Les sujets étaient 256 étudiants universitaires dans des cours d'initiation à la psychologie qui se sont présentés au hasard aux traitements san savoir d'avance à quelle sorte de musique ils seraient exposés.

Ni les scores pour l'acquisition ni ceux pour la mémoire n'ont montré aucun effet pour la sorte de musique, ce qui est contraire aux enquôtes antérieures. Néanmoins, il y avait des différences significatives parmi les 16 sélections musicales différentes en ce qui concerne les scores d'acquisition. Les deux sélections employées pour la musique classique, la musique dissonante et la musique japonaise ont eu des résultats plutôt disparates pour l'apprentissage du vocabulaire. Les autres sortes de musique étaient plutôt conséquentes dans leurs effets sur l'acquisition, mais comme groupe elles ne furent pas différentes de manière significative dans l'apprentissage des groupes de contrôle sans musique.

La sorte de musique et la sélection musical eurent un effet significatif sur les scores de concentration et d'amour pour la musique. Mais ces grandes différences n'eurent pas d'effet sur l'apprentissage de vocabulaire. Les coëfficients de corrélation varièrent entre 0,1 et 0,2 ce qui est d'influence minime. Tout cela fut corroboré par une analyse de facteurs.

En bref, la présente étude ne soutient pas les enquêtes antérieures qui ont prétendues que certaines sortes de musique de fond faciliterait l'apprentissage verbal avec plus d'efficacité que la condition san musique. Les sélections musicales individuelles, néanmoins, ont eu de l'influence sur l'apprentissage verbal, parfois de façon négative, en retardant l'apprentissage, et avec une grande différence entre sélections musicales. Les généralisations à propos des sortes de musique de fond sont donc hasardeuses, et devraient être basées sur la recherche empirique. On propose des hypothèses sur les raisons pour lesquelles l'étude présente n'a pas eu des résultats analogues aux recherches antérieures.

Der Affekt von Hintergrundmusik auf das Lernen von Wörtern.

Dieses Experiment hatte das Ziel, den Einfluss von Hintergrundmusik auf das Lernen und Erinnern von Vokabeln zu untersuchen, wenn das nicht im SALT Klassenzimmer stattfindet. In der kritisch durchgesehenen Literatur darüber wird behauptet, dass Musik des Barocks, bzw. der Klassik mit Erfolg verwendet wird, um Studenten beim Lernen zu helfen. Diese Arbeit untersucht unter kontrollierten Labor-statt Klassenzimmerbedingungen diese sieben Arten von Musik: Musik aus dem Barock und aus der Klassik, disharmonische Musik, japanische Musik, Marsch-, Meditations- und Rockmusik, und, als Kontrollgruppe, keine Musik, um herauszufinden, wie diese das Vokabelnlernen von Studenten fördern würden. Es wird ein "mixed analysis of variance" (ANOVA) benutzt. Die mit den Versuchspersonen untersuchten Faktoren waren: die Art der Musik, Replik der Musikauswahl, Suggestion, Ordnung der gelernten Listen, und Geschlecht der Versuchspersonen. Die zwei kognitiven abhängigen Variablen oder Kriterien waren Erwerbung und Behalten von 25 Vokabeln pro Liste. Während die Versuchspersonen die Listen studierten, wurden vier affective Kriterien bewertet: Behaglichkeit, Wachsamkeit, Konzantration und positives Verhältnis zur Musik. Versuchspersonen waren 256 Universitätsstudenten aus Einführungskursen in die Psychologie; die Studenten schreiben sich zufällig für eine Behandlung ein, ohne im Voraus zu wissen, welcher Art der Musik sie sich überliessen. Konträr zu der vorangegangenen Forschung erwiesen sich weder Resultate bei der Erwerbung sowie bei dem Behalten von Vokabeln als Auswirkung, die von der Musikart abhängig ist. Es gab jedoch signifikante Unterschiede unter den 16 verschiedenen ausgewählten Musikstücken in Beziehung auf Resultate. Die zwei ausgewählten Musikstücke, die für Klassik, disharmonische und japanische Musik verwendet wurden, ergaben recht ungleichartige Resultate beim Vokabelnlernen. Die erstlichen Sorten von Musik waren in ihren Effekten auf Erwerbung ziemlich gleichbleibend; aber die gesamt Gruppe zeigte

keine signifikanten Unterschiede zu dem Lernen in den Kontrollgruppen, die keine Musik hörten. Die Art und die Auswahl der Musik hatten einen signifikanten Effekt auf die Bewertung von Konzentration und positivem Verhältnis zur Musik. Aber diese grossen Unterschiede hatten keinen Einfluss auf das damit verbundene Vokabelnlernen. Der Vergleichskoeffizient zwischen kognitiven und affektiven Kriterien, der von 0,1 bis 0,2 reichte, zeigte unbedeutenden Einfluss. Dieses Resultat wurde von einer Faktorenen-analyse bestätigt. Schleisslich zeigte diese Arbeit keine Bestätigung für die oben erwähnten Behauptungen, dass gewisse Arten von Hintergrundmusik Vokabelnlernen mehr förderte als keine Musik. Jedoch haben einzelne ausgewählte Musikstücke einen Einfluss auf Vokabelnlernen gehabt, manchmals negativer Einfluss auf das Lernen, und mit grossen Unterschieden zwischen den Musikstücken. Daher sind Verallgemeinerungen über die Arten von Hintergrundmusik gefährlich. Vermutungen darüber, warum diese Forschung frühere Ergebnisse nicht bestätigte, wurden geäussert.

El efecto de música de fondo sobre el aprendizaje de palabras.

El propósito de este estudio experimental fue el de investigar la influencia de música de fondo sobre el aprendizaje y la memorización de palabras de vocabulario fuera del estudio que toma lugar en una clase SALT. La literatura repasada afirma que música clásica y barroca son efectivas en ayudar que alumnos aprendan materia de clase. Este estudio investigó, bajo condiciones de laboratorio controladas en vez de condiciones de clase, los siguientes siete tipos de música: barroca, clásica, disonante, japonesa, de marcha, meditativa, rock, y ninguna música como control, para ver su facilitación en el aprendizaje de palabras de vocabulario en estudiantes. Un diseño de análisis mixto de variación se aplicó, con los factores entre sujetos de tipo de música, repetición de selección de música, sugestión, orden de listas aprendidas y género del sujeto. Las dos variables dependientes cognitivas o criterios fueron adquisición y retención del significado de 25 palabras de vocabulario por lista, y cuatro criterios afectivos fueron agradabilidad, presteza, concentración y grado de gusto de la música mientras se estudiaban las listas. Los sujetos fueron 256 estudiantes universitarios de cursos de introducción de psicología que se apuntaron al azar a tratamientos sin saber de antemano a qué tipo de música serían expuestos.

Ni las marcas de adquisición ni de retención en el aprendizaje de vocabulario mostraron el efecto de tipo de música, contrariando investigaciones anteriores. Sin embargo, se encontraron diferencias significativas entre las 16 selecciones en marcas de adquisición. Las dos selecciones de música usadas para clásica, disonante y japonesa produjeron resultados dispares en aprendizaje de vocabulario. Los tipos de música restantes fueron consistentes en sus efectos sobre adquisición, pero en conjunto no fueron significativamente diferentes del aprendizaje de los grupos "control" sin ninguna música.

Tipo de música y selección de música afectaron significativamente los grados de concentración y gusto de la música. Pero estas grandes diferencias no influyeron el aprendizaje de vocabulario asociado con coeficientes de correlación entre los criterios cognitivos y afectivos extendiendo entre 0.1 hasta 0.2, una influencia claramente minima. Esto se corroboró por medio de un análisis de factores.

En resumen, este estudio no mostró ningún apoyo a las contenciones previas que ciertos tipos de música de fondo facilitan el aprendizaje verbal mas efectivamente que ninguna música mientras se aprende. Selecciones individuales de música, sin embargo, enfluyeron en aprendizaje verbal, algunas veces de forma negativa interfiriendo con el aprendizaje, y con grandes diferencias individuales entre selecciones de música. Asi, generalizaciones sobre tipos de música de fondo son arriesgadas y deben basarse en investigaciones empiricas. Se hicieron especulaciones sobre la razón por la cual este experimento no replicó resultados previos.

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Terminating the Tyranny of Time From 21st Century Education

William Allin Storrer, Ph.D.

Abstract. "Time" tyrannizes students in contemporary education. Schools develop but one operational brain mode (or "grammars of thinking"), the temporal/rational/competitive/inventive mode, denying development of the spatial/intuitive/cooperative/creative self. Time in the classroom has replaced acquired learning as our yardstick of educational achievement. Curricular revolution can address this conflict and lead to whole-brain development. The earliest years of school should comprise a core of fundamentals, not only linear activities such as reading, 'riting and 'rithmetic, but also drama/dance, art, music and team sports, each of which requires a spatial grammar. Then we should move from development of these grammars of thinking to applications involving modern technologies. By the 21st century, students will demand to be taught when each is in his/her best state of mind to learn. With the interactive laser videodisc, our best teachers can produce the best possible video-assisted learning. With testing built into the format, each student learns what s/he has comprehended, and reviews weak areas immediately. Interactive video plays no favorites; teachers always do. The interactive laser videodisc can educate us to use language precisely, so the brain's problem solving in temporal mode can be error free. A creatively educated brain will work in spatial mode rapidly. An integrated grammar can be both fast and precise. Interactive video can improve all three grammars. The world may settle on a common language for education, so this technology can rid us all of the tyranny of time.

"Time" tyrannizes students. "Time" tyrannizes students of all ages in contemporary education. They must turn in assignments on time, a time determined by teachers and having little to do with the schedule by which the student must live. Classes are set to teacher schedules, with little regard for the pacing of a student's internal clock. Teachers often grade by the amount of time they think a student spent on a project, rewarding effort more than accomplishment. Even the curriculum is heavy with courses that require our brain to operate in its temporal mode, denying any value to those subjects that develop the spatial form of thinking: art, music, team sports.

The human brain has developed at least two very different, complementary, highly effective means of working with information to solve problems; a linear-temporal or left-brain mode and a spatial-instantaneous or right-brain mode of operation. Our schools develop only one of these, the temporal/rational/competitive/ inventive half, to the virtual exclusion of the other. This creates half-educated persons in the dozen years allotted to basic processing by denying our children development of their spatial/intuitive/ cooperative/creative selves. This is the real disaster of American public schooling.

In everything organic, there is a structure. That structure has a necessary grammar which determines what the thing is. Unless we find the right structure for education, we cannot properly educate our children! The structures we currently employ may have been fine for an era of slow communications. They do not serve for an era of ultra-high speed, fast-as-light communications. We have a "linear grammar" in place in our public schools and state universities, but it is being taught imprecisely and must be upgraded. We must also teach the grammar of creative processes to develop the cooperative element of our brain. Today, even where creative studies enter into our current educational system, they are almost always taught by linear, rather than wholistic, methods.

Sometime, perhaps back in the 1950s, educators began the wholesale interchange of quantity for quality. Time in the classroom replaced acquired learning as our yardstick of educational achievement.

The linear mind bases everything on time. It is now the number of hours we spend in, rather than the experience we get out of, the classroom that governs our educational system. We have developed elaborate procedures over the years for using the linear, left-brain capabilities of our multi-capacitied brain, but we've developed no means for productively accessing the right-brain mode in our schools. This is a critical deficiency.

Conversely, television has made our children streetwise in ways we would have found quite unimaginable 25 years ago. Television is largely responsible both for the resuscitation of the spatial mode of thinking as well as the destruction of many of the gains of linearization. Only a curricular revolution of monumental proportions can address this conflict and lead to whole-brain development Discussion of curricular reform stretches the limits intended for this presentation, but it would be remiss if I did not present at least an outline.

The first six years of school should comprise a core of fundamentals, not only reading, 'riting and 'rithmetic, but also music, drama/dance, art and team sports. The first three implement linear thinking, the latter wholistic or spatial thinking. The competitive ethic would be balanced by a self-development ethic, reducing our society's penchant for war as a solution to international conflicts of opinion. In the second six years, we should move from the development of the "grammars of thinking" to applications in which modern technologies, such as interactive video, play an important part.

To add education of the spatial right brain to an already overloaded left-brain dominated curriculum requires greater accuracy in, and efficiency of, teaching the left brain. Right now, we simply do not "have the time" to do it. Only computer assisted interactive video-based instruction can achieve this improvement, thus freeing up time for parallel development of the right brain.

Further, by the 21st century, students will no longer put up with having to go to a class at 3 p.m. which their minds were ready for at 9 a.m. (or 2 a.m., or 4:23 p.m., or whenever). Each will demand, and rightfully so, to be taught when s/he is in her/his best state of mind to learn, subject by subject. Individual teachers are ill-equipped to provide this; technology must be called to the rescue.

Interactive video, particularly the interactive laser videodisc, is the best medium currently available to implement the desirable goal of terminating the tyranny of time from 21st century education. It is available now, while interactive uses of bubble memory and rival technologies are t best a decade or more away.

A laserdisc doesn't have to be paid semester after semester. It is virtually indestructable, so will reduce educational costs. Teachers, only the best, will be retained for tutoring where needed, or for transmitting information beyond the interactive capabilities of the system.

The world's best teachers can be employed to produce the best possible video-assisted learning, and can be suitably well paid. Courses requiring frequent updates, such as technical and scientific subjects, will find the new 8" laserdisc suitable to such situations. Laboratory facilities can be provided at regional centers, and need not be needlessly duplicated at every educational institution.

Can you not imagine David Attenborough's Life on Earth and The Living Planet as parts of a video-based science program, and Richard Attenborough's Gandhi as part of a history course on the Asian subcontinent? What about history course on the Asian subcontinent? What about Stanley Karnow's study, made into a thirteen-segment PBS television presentation, *Vietnam, A Television History*, as the basis for a course on contemporary military history? And the "Shakespeare Plays" shown on public television; wouldn't watching them, rather than reading the play scripts, be a superior basis for teaching dramatic literature? Most students can no more decipher a play script than they can sight-read an orchestral score. Drama was meant to be seen, with its language explicated by visual activity; anything less is asking a student to do in his mind what it takes a stage director to do in mind and on stage. Until now, "dramatic literature" courses have served only one positive purpose, to give employment and enjoyment to English teachers; it usually gives boredom to students. With video, the students, already used to the medium, will join in the enjoyment. With testing built into the presentation in video-interactive format, the student learns immediately if s/he has comprehended the material, and can return immediately to sections s/he fails to fully understand.

Further, interactive video plays no favorites; teachers always do. One teacher of record, given a list of students with their locker numbers, ranging in the 130s to 150s, thought she'd been given their IQs. As she expected, these students, actually an average class, performed for her as geniuses. So many students perform poorly because their "track record" is passed from teacher to teacher; successive teachers expect less and grade accordingly, and the student expects no more. Interactive video, however, plays no favorites. This is one reason why students take so avidly to this technology, for each can expect to be treated the same as the class genius. There is no bell-shaped curve, and any-, even every-, one can achieve an A for 100 percent performance. A student given as much time as he/she needs to learn the material, can achieve complete comprehension.

Here lies a key to our basic problem. We desire both precision and speed in our learning. We educate, however, only that part of the brain dedicated to precision, yet demand of it speed.

Properly educated, the temporal (left brain) mode has no excuse for being inaccurate. Its step-by-step problem-solving method reassures us at each juncture that the previous step was correct at the time that particular step was taken. Whenever we reach a wrong answer, previous steps remain correct, reassuring us of progress. Of equal value, the spatial (right brain) mode's uniqueness is its ability to provide an answer to any problem instantly. Contemporary American education drives this spatial mode into hibernation before the onset of puberty, and ignores the possibility of integration of the two modes.

To achieve maximal left-brain precision requires that we learn precise language. Failure to teach language correctly puts a short circuit into the whole educational system. If the brain is taught to use language precisely, without error, then the brain's problem solving in linear fashion will be precise, without error. So, there's no excuse for imprecision. There's only excuse for the time that it takes to solve something. The left mode may have to move very slowly in order to get its correct answer, but it should always get a correct answer. Yet, in our teaching system, we set time limits on tests. This defeats temporal-mode precision.

The interactive laser videodisc might first be called into action to correct the utter devastation wrought upon the teaching of our mother tongue over the past few decades. Let us consider this as a paradigm.

Language is of two basic kinds, factual and creative, paralleling our two principal operative brain modes. We need to teach each form independently. If the brain is educated to use language precisely, then its problem solving in temporal mode can be error free. Educated to use language creatively, its problem solving in spatial mode will be rapid. Together these meet the needs of the 21st century.

This leaves us with little choice but to employ machines to teach English and other "left-brain basics" if we are to recapture lost potential. Only with the likes of a John Ciardi to proof-read our English courses will we ever have accurate English in our classrooms. We cannot rely on a fourth generation of English teachers who were taught by others who themselves could not use, precisely or beautifully, the English/American language. We should not allow a teacher who cannot prove s/he can write perfect English to teach English. We should employ machines in their place.

When we want or need speed, we should engage the right brain mode, for it is uniquely equipped to provide answers quickly. The right mode has many excuses for being slightly imprecise, but never for being slow. Only when the knowledge it has gathered is incomplete will the pattern-solution it generates fall short of perfection. Teachers can still do the teaching for this, the spatial, level of brain operation better than existing machine programs, but they must be artist-teachers, with proven right-brain capabilities.

A third stage beyond these two is important. Here the two hemispheres work in an integrated form. In this mode, they check each other out. Integrated grammar (i.e., full hemispherical interlock) can be both fast and precise. The failings of either system may occur, however, very clearly, very obviously, where the left brain has not been taught precision, but been told to go fast, or where the right brain is slowed down or fed insufficiently detailed informtion.

Interactive video can implement improvement in all three operational brain modes, temporal, spatial and integrated, by enriching the language and grammar in which the brain solves problems in the respective modes. It can be absolutely error-free. It is very fast.

Though laserdiscs can carry four independent audio tracks, each with a different language, we may expect the world to finally settle on a common language for educational purposes, much as the world has settled on English as its common business language, and Latin for medicine. Thus, anyone in the world will be able to have the best possible instruction right in his/her own home at a time suitable to his/her peak of interest. No one need be deprived of the best possible education due to the conditions of his/her birth, be those of social, geographic, national, cultural, economic or other origin.

In the days of the first universities, Latin was the language of all education. Monks in that classical world had access to all the world's knowledge. They also had "all the time in the world" to discover its intricacies. The modern world, by ridding itself of the tyranny of time in its educational practices, may yet revive the joys of this fabled past, and enrich the lives of all.

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Bannir la tyrannie du temps de l'éducation du 21iéme siècle.
Le "temps" tyrannise les étudiants dans l'éducation contemporaine. Les écoles ne développent qu'un mode d'usage du cerveau (ou <grammaire de la pensée>), le mode temporal/ rational/compétitif/inventif, tout en supprimant le développement du moi spatial/intuitif/coopératif. Le temps passé dans la salle de classe a remplacé l'acqui comme notre mesure d'accomplissement pédagogique. Un révolution dans le programme scolaire peut affronter ce problème et mener au développement du cerveau entier. Les premières années à l'école devraient comprendre un programme scolaire de base que ne se limite pas aux activités linéaires comme la lecture, l'écriture, et le calcul, mais qui comporte aussi le théâtre, la danse, l'art, la musique et les sports d'équite, des activités qui exigent une grammaire spatiale. Ensuite,

on devrait aller au-delà du développement de ces grammaires de la pensée pour arriver aux applications qui engagent les technologies modernes. Par le 21ième siècle, les élèves insisteront à apprendre quand chacun est dans le meilleur état d'esprit pour apprendre. Avec le vidéodisc interactif, les meilleurs enseignants peuvent produire les meilleurs programmes possibles pour l'apprentissage par vidéo. Avec un composant d'auto-contrôle dans le système vidéodisc, l'étudiant se rend compte de ce qu'il a compris. Ainsi, on peut réviser les points faibles immédiatement. Le vidéodisc interactif ne favorise pas certains élèves préférés, ce que font toujours les enseignants. Le vidéodisc interactif peut nous apprendre à employer la langue avec précision; ainsi, le cerveau peut résoudre des problèmes dans le mode temporal sans erreur. Un cerveau éduqué de façon créatif travaillera rapidement dans le mode spatial. Une grammaire intégrée peut être à la fois rapide et précise. Le vidéo interactif peut améliorer les trois grammaires. Il se peut que le monde se décide pour une langue commune pour l'éducation; ainsi, la technologie peut nous libérer de la tyrannie du temps.

Das Ende die Tyrannei der Zeit im Bildungswesen im dem ein und zwangzigsten Jahrhundert.

"Zeit" tyrannisiert Schüler in der heutigen Erziehung. Die Schulen entwickeln nur einen einsatsfähigen Gehirnmodus (bzw. "grammatische Strukturen des Denkens"), den Temporal-/ Vernunfts-/Konkurrenz-/Erfinderungsmodus; dadurch verleugnen sie die Entwicklung des räumlichen/intuitiven/kooperativen/ schöpferischen Ichs. Die in dem Klassenzimmer verbrachte Zeit ist an die Stelle des erreichten Lernens als Leistungsmassstab getreten. Eine Revolution im Curriculum kann sich diesem Konflikt zuwenden und zur Entwicklung des ganzen Gehirns führen. In den ersten Schuljahren soll man eine Basis von Grundfähigkeiten haben, nicht nur Lineartätigkeiten, wie Lesen, Schreiben und Rechnen, sondern auch Drama/Tanz, Kunst, Musik und Mannschaftsport, wovon jede eine Raumgrammatik verlangt. Danach sollten wir uns von der Entwicklung deiser Grammatikarten des Denkens zu Anwendungen, die moderne Technik einschliessen, bewegen. Bis zum 21. Jahrhundert werden Schüler verlangen, dass sie Unterricht bekommen, wenn jeder in seinem/ihrem besten Geisteszustand fürs Lernen ist. Mit der interaktiven Laservideoplatte könnten unsere besten Lehrer das allerbeste videounterstützende Lernen verlanlassn. Mit den in das Format eingebauten Testversuchen lernt jeder Schüler das, was er/sie verstanden hat, und wiederholt schwache Gebiete sogleich. Interaktives Video hat keine Favoriten; Lehrer haben sie immer. Die interaktive Laservideoplatte kann uns zu einem präzisen Gebrauch von Sprache erziehen, so dass das Problemlösen im Temporalmodus des Gehirns fehlerlos werden kann. Ein kreativ erzogenes Gehirn wird sehr

schnell im Raummodus funktionieren. Eine integrierte Grammatik kann beides, schnell und präzis sein. Interaktives Video kann alle drei Arten von Grammatik verbessern. Es ist möglich, dass die Welt sich auf eine allgemeine Sprache für die Erziehung einigte, und damit könnte diese Technolgie uns allen von der Tyrannei der Zeit befreien.

Terminando la tiranía en educación del siglo XXI.

"Tiempo" tiraniza estudiantes en enseñanza contemporánea. Escuelas desarrollan solamente una modalidad de cerebro operacional (o "gramáticas de pensamento"), la modalidad temporal/racional/competitiva/inventiva, negando el desarrollo espacial/intuitivo/cooperativo/creativo. Tiempo en clase ha sustituido la adquisición de aprendizaje como nuestra medida de realización educativa. Una revolución de programas de estudio puede tratar este conflicto y llevar al desarrollo cerebral completo. Los primeros años en la escuela deben incluir una serie de fundamentos, no solamente actividades lineares como lectura, escritura, y matemáticas, sino también drama/baile, arte, música y deportes de equipo, cada una de las cuales requiere una gramática espacial. Después todos debemos pasar del desarrollo de estas gramáticas de pensamiento a aplicaciones que incluyen tecnologías modernas. Una vez llegado el siglo XXI, estudiantes demandarán una enseñanza en la cual cada individuo está en su estado mental máximo para aprender. Con el videodisco interactivo lasar, nuestros maestros mejores pueden producir el mejor aprendizaje posible asistido por vídeo. Con pruebas incluidas en el formato, cada estudiante aprende lo que ha comprendido y repasa áreas flojas inmediatamente. Vídeos interactivos no tienen favoritos; maestros siempre los tienen. El vídeo lasar interactivo puede educarnos en el uso de lenguaje con precisión, para que solución de problemas en la modalidad temporal del cerebro sea sin errores. Un cerebro educado creativamente trabajaráa en la modalidad espacial rápidamente. Una gramática integral puede ser tanto rápida como precisa. Vídeo interactivo puede mejorar las tres gramáticas. El mundo puede decidir idioma común para educación, para que esta technologia nos libere a todos de la tiranía del tiempo.

J. of the Society for Accelerative Learning and Teaching, 1985, 10(1)

An Example of Limbic Learning*

Win Wenger, Ph.D.

Abstract. Some support is expressed for Professor Machado's thesis regarding the pre-eminent role of the limbic system in learning and in intellectual behavior generally, and a working demonstration of apparent limbic learning was attempted with the audience.

This writer had the very good fortune to hear Dr. Luiz Machado deliver a paper at the conference of the European branch of the Society for Accelerative Learning and Teaching (SALT), last May in Stockholm, and to hear him begin the very kind of intellectual controversy which that educational organization very much needs. Professor Machado's argument may well have been the most interesting presentation there; perhaps the most interesting presentation in all the years of conferences of the Society for Accelerative Learning and Teaching.

Dr. Machado's thesis is that effective learning mainly depends upon activation of the limbic system and is basically a matter of emotions and appetite drives. Professor Machado's thesis not only appears to be one of the more intriguing education theories ever ventured but might very well be correct, and strikes a strong responsive chord in this writer who began (1979) to argue that most human giftedness and/or genius appears to be directly a function of the appetite structures of the brain.

Some of this writer's argument rests on the fact that nearly all literature, descriptions and accounts of genius behavior and of episodes demonstrating exceptional human giftedness, correspond exactly to definitions and descriptions of what psychologists usually refer to as "drive-reduction behavior." Such behavior is defined as the function of the brain's appetite structure.

According to biographical, autobiographical, survey and anecdotal accounts, the times of life when most geniuses or gifted children are lost to becoming merely intelligent and well-informed but uninspired individuals, almost always correspond to the main times of physiological appetite change:

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*Paper presented at the International SALT Conference in Washington, DC, May, 1985.

high-growth preteen and early teen years, and at middle age.

Unscientific, incidental observation by this writer appears to indicate an incidence of problems of weight--over, under and oscillating--among gifted people which is more frequent than among average people. If a survey were to confirm this relationship (and it might well not), one explanation might be that of the stress engendered by being exceptionally, inconveniently gifted when among ungifted peers and institutions and societal structures. It must also be noted that offsetting this stress are the greater personal resources among gifted individuals with which to cope with such stress. Another argument might be that the gifted, inclined toward more intellectual and/or more aesthetic pursuits, may live more sedentary lives. This may account for the apparent high incidence of overweight. A counter argument to this, however, is based upon the Terman Study (1926), which found that the intellectually superior also tended to be physically superior. Also those among the gifted who for whatever reason do not engage all of their talents in ordinary occupations might reasonably be expected to have more surplus time and attention available with which to pursue recreational activities, including physically recreational activities. This, too, may be regarded as somewhat offsetting. Both professional and popular accounts of anorexic and bilorexic patients usually refer to such patients as being highly or unusually intelligent, though such mention may be to highlight the irony of such patients' dietary behavior being so curiously unintelligent. All this is very speculative and unscientific until investigated, but yet one more explanation for the possible disproportion of weight problems among populations of gifted people might indeed very well be that a common root exists, for both the physical weight anomaly and the unusually gifted behavior, in anomalous functioning of the brain's appetite structures.

The relation of hunger to heightened mental acuity and performance also tends to support the theory. That relation is demonstrated in many secular, mental and spiritual disciplines which use fasting as a means to improve performance levels and/or whatever they define as "enlightenment." Mitigating this argument, however, is the fact that part of the explanation usually given for such fasting is that it is simply a means to discipline the body so that the body's petty needs will no longer interrupt at inconvenient times while one is deeply engaged in higher inquiry. Whatever the explanation of fasting, the widespread practice of fasting in conjunction with pursuit of higher human performance is certainly interesting in the present context.

That exceptionally high performance and acuity may be associated with the appetite structures of the brain makes excellent sense from the standpoint of biological evolution. When hunting was poor, those of our ancestors who were not aroused to a more intelligent and/or arduous hunting performance simply did not live long enough to become our ancestors! We are all descended from those who became much cleverer when times were very lean. An argument against this proposition can be made on the grounds that hypoglycemics lose much personal effectiveness under conditions of hunger, but it must be remembered that the condition of hypoglycemia is indeed a pathology and therefore an aberration, and that hypoglycemia moreover has often been attributed to high levels of toxicity not encountered by our prehistoric ancestry. In balance, a case exists for the association of genius with the brain's limbic appetite structures, through the action of bioevolutionary selection.

If this relationship between giftedness and appetite structures indeed exists, the increasing and widespread use in the United States of appetite-suppressants to control smoking and diet, is a matter for the very gravest concern.

If giftedness is indeed a function of the brain's limbic appetite structures, then an additional avenue exists to support Professor Machado's thesis that learning, a behavior highly characteristic of gifted people, may depend more upon the limbic system than upon the cortex.

For a century there has been controversy over whether genius is inherited or "made"; psychologists and educational theorists refer to this as the "nature versus nurture" controversy. Over the past few years, support appears to have swung strongly toward the view that levels of intelligence are largely shaped by circumstance and can readily be altered--indeed, this writer (1972) has argued that very thesis. There remains, however, an undeniable inborn predisposition toward higher or lower intelligence, whether that predisposition is genetic or cytoplasmic--though of course it has to be the dynamic interaction of that inborn predisposition with environmental factors which creates the actual outcome regarding level of intelligence. This is germane to the thesis of limbic giftedness and limbic learning in that to the extent that genetic heredity is a factor, its main effect simply has to be at subcortical levels. The cerebral cortex simply is too free wheeling, its program too open and indeterminate, for genetics to affect its performance very much directly. Genetic programming is very real at subcortical limbic brain levels. To the extent that genetic heredity has an influence on one's level of intelligence, it does so through the limbic system. This does not directly prove the proposed role of the limbic system in learning, but tends to suggest it in the regard that one's ability to learn is to at least some significant degree determined in the limbic system.

Still controversial but also strongly supported, is Dr. Temple Fay's thesis of sequential stages of brain development paralleling the stages of behavioral development in the individual and the stages of biological evolution of species. That thesis provided the theoretical underpinning of the substantial work done, both in Philadelphia, Pennsylvania and reportedly in Brazil, by the Institutes for the Achievement of Human Potential. Though certainly arguable in some regards, the Institutes have certainly at least presided over a large number of interesting recoveries of children from medically-diagnosed brain damage and mental retardation. Whether these were "cures" and whether they in any way resulted from the treatments offered and taught by the Institutes as therapy, may have to be decided by history. But their theory and defined practices are highly consistent with the general pattern and theory of therapy. A hundred different therapies and specialties, each feeling that it has an entirely unique approach to human problems, may be described in this one way despite their presumed unique differences:

> Human development progresses up an upside-down pyramid of discrete stages. The rudimentary competencies and experiences of earlier, lower stages, have to receive adequate development if the next stage up is to become fully effective and to actualize its wider ranging competencies, sophistications and experiences. In the Institute's model, a sufficient amount of sensorimotor experience at spinal, fish-brain level is required to program the experiential code upon which the midbrain or limbic system must operate. Then sufficient limbic-level experience is required before it can be generalized into the experiential code upon which the cerebral cortex must operate. Trauma or deprivation at any level damages all successively higher levels. Therapy or enrichment consists of programming additional corrective experience at the lowest level in which deficiency is found, then working additional enrichment up successively through each of the higher stages. Most such models of human development and therapy are emotional and/or psychoanalytic; several are cognitive; and several, such as the Fay-based model pursued by the Institutes in Philadelphia, are sensorimotor and/or neurological.

Here, too, though in senses somewhat different from that expressed by Professor Machado, the limbic system controls learning, if indeed, learning is a cortical function as generally believed.

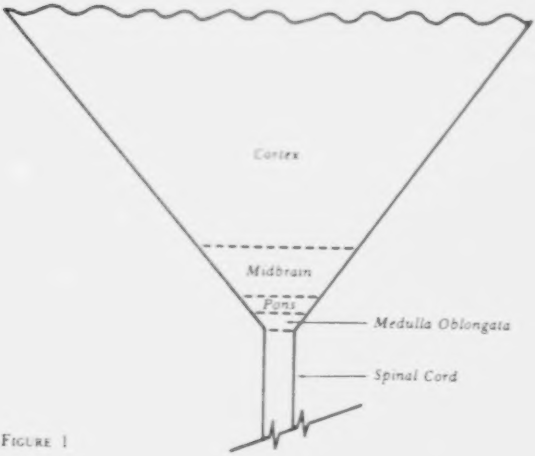
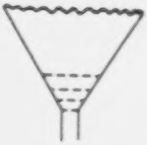
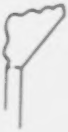


FIGURE 1

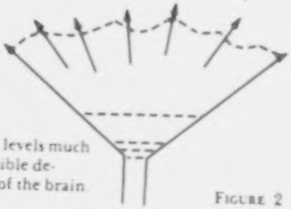
The general therapeutic model, mapping across many disciplines and theories of human development and therapy, as applied to a schematic of brain development initially suggested circa 1948 by Temple Fay, M.D., the physician who was thrown out of Temple University for discovering cryogenic surgery. Human development, according to many of these theories and programs, is an upside-down pyramid of sequential stages of development (Fig. 1), each stage dependent upon the development of the prior stages through encompassing a far wider range of behaviors and perceptions. Inadequate development, or damage prior to the development of stages above it, depress development of all higher stages, repair or enrichment of which require repair or enrichment of lower, prior stages in the scheme of development (Fig. 2).



Average development model of the brain.



Deficient development. Put in experience to enrich and rebuild lower levels, or the higher levels cannot develop properly.



Better enrichment of lower levels much improves the range for possible development of higher levels of the brain.

FIGURE 2

Note: From How to Increase Your Intelligence, (pp. 49-50) by W. W. Wenger, 1975. New York: Bobbs-Merrill Publishing Co.

An intriguingly similar parallel is found in the medical discoveries in France, earlier this century, by one Georges Quertant (1972). He found positional distortions in the visual field of patients, corresponding to almost the whole range of human difficulties and diseases. The mechanism to account for such correlated distortions was described as being localized pressures upon the optic track where it runs through the near-floor of the brain and through most of the baser regions of the brain which relate to physiological functions. By retraining the visual positional perception of his patients, Dr. Quertant, whose work reportedly found some medical acceptance in France, appears to have exerted an influence through the optic track upon those anomalous areas along the base of the brain which had depressed that track. In turn, a remarkably wide range of behaviors and diseases in Quertant's patients appears to have been alleviated or cured. At this point, with certainly incomplete knowledge, this writer is unaware of any substantial contradiction to Quertant's thesis or to the indicated efficacy of such psycho-sensorial training. Again, we see indication that matters deep in the limbic brain or deeper exert control over areas of people's lives far out of conventionally expected context, lending some support to Dr. Machado's thesis that the limbic system controls the learning process however cortical we have hitherto believed that process to be.

The writer is reminded also of some fundamental propositions in the philosophy and training discipline of general semantics, as formulated by Count Alfred Korzybski (1958). His observation most relevant here was that all cognition routes itself not only through the cortex, but also through the thalamus, seat of the emotions. By consciously tracking our intellectual choices and responses (including our supposedly "detached" academic and scientific judgments) through the thalamus (the "cortico-thalamic pause") and forcing ourselves to become aware of the emotive content we have associated with even the most purely intellectual of perceptions, we can become far more rational and effective than when that emotive content remains hidden and can distort our perceptions secretly as it does.

Also, this writer is reminded of the fact that there exists in the United States a fair number of educators, psychologists and therapists who hold views not entirely dissimilar from those of Dr. Machado. Witness the existence of several professional organizations and associations for affective (i.e., emotional) education, mostly affiliated with the national Association for Humanistic Psychology and/or the Association for Humanistic Education*. Professor Paul Hollander at this conference can better speak to this point than can this writer.

Enough of arguments for now. Let us propose a test of Professor Machado's thesis, descending (or ascending?) from intellectual correlations to harder-nosed empiricism. If effect depends mainly on affect; if effective learning does, indeed, depend mainly upon activation of the limbic system regardless of "higher" cortical functions, this is a matter which can and should be readily tested. Two rather simple types of test come immediately to mind:

1. Many channel EEG studies which can infer stereotaxically the degree of limbic involvement in ongoing brain activity in and out of learning situations which have been deemed "effective" by some standard of definition.

With such EEG monitoring, expose students to a variety of learning experiences over some days or weeks. From the EEG record, correlate limbic functioning with learning experiences to possible "replay" of internal phases of that learning, and to subsequent demonstrations of the results of those different learnings. Assess the quality, quantity and degree of student retention of those diverse learnings at intervals following, still measured against the degree and location of limbic EEG behavior during those diverse learning sessions. If Machado's thesis is correct, effectiveness of those various learnings will correlate positively with the degree of limbic system arousal.

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2. Project Renaissance (1981) has developed various enhanced learning techniques wherein students accelerate and enrich their learning through a strongly focused multisensory identification with a real or imaginary genius in the field or skill they are studying. There is already a very high increase in learning performance associated with such procedures. If Professor Machado's thesis is correct, the resultant increases should sort out as follows:

Geniuses whose "story" in connection with the skill or study in question is a passionate, emotionally intense one, even to the point of trauma or tragedy, when identified within one of the special ways of the Project Renaissance protocols, will give rise to significantly better results than will the very same procedures using geniuses whose stories are not emotionally wrought.

Another form of the second type of test-using learning experiences of varying emotional content and emotional intensity to correlate with effectiveness of learning, might be suggested by Professor Paul Hollander at this conference, through his acquaintance with some techniques of one or more educational associations for affective learning.

Here we propose to provide a direct example experience of the kind of emotionally enriched learning to be had through some of the Project Renaissance procedures. We have chosen History for this particular experience, but it could be physics or art or psychology or medicine or almost any curriculum subject involving skill and/or cognitive understanding as distinct from memorization.

The following is adapted from versions of "A Sortie into History" contained in How to Increase Gifted Students' Creative Thinking and Imagination: A Step-by-Step Instructional Guide for Teachers and Administrators, Manassas VA: The Reading Tutorium, 1983. In its original form, this procedure may readily be used with previously unprepared students of college and high school standing. In the present instance, teachers unready to meet emotional response from students may wish either to slightly tone back the emotional aspects of Steps 15-17, or have students train first in the "calm-breathing patterns" procedure taught in Beyond O.K. (1979&80). The level of emotion designed for the present form of the exercise, however, is about that of a fairly involving movie, drama or book.

History as a Human Experience: A Limbic Encounter

Instructions for Reader:

a. Have on hand a chime, waterglass or other toning implement whose agreeable sound is distinctive enough to be easily heard when everyone is talking at once.

b. Arrange for the room or space to be reasonably calm and uninterrupted for about 50 minutes.

c. Have your participants each pick a partner to work in pairs. Three at a time can work together but two is preferred. Have partners sit very close together so they can easily hear each other and be heard while speaking softly when everyone is talking at the same time.

d. Arrange agreement that one sounding of the chime or waterglass means a half-minute's notice. Upon the one toning, participants are to continue doing what they are doing at that time but should be ready a half-minute later to hear the next instruction.

e. Important: Obtain agreement from all that two or multiple soundings of the chime or waterglass ends the current step, even though everyone stays with the experience. Upon the two or multiple soundings, all participants are to instantly cease talking, in midsentence or even in midword, to hear the next instruction step and so that others can hear that next instruction step. However much everyone stays in the experience, everyone stops talking at the instant of hearing that multiple binging of the chime.

Reader: Here is a checklist for the above instructions:

( ) Room or space reasonably calm, uninterrupted for 50 minutes
( ) Waterglass or chime ready, and spoon or other metal striker to sound it
( ) Participants all partnered; sitting close together
( ) Agreement that one "bing" equals a half-minute's notice
( ) Agreement that multiple "bings" equals instant cease talking

Checklist for the initial instructions below, of what you want your participants to be doing as you guide them through the experience following:

( ) Describing rich details aloud to each other
( ) With eyes kept closed
( ) Both going at it without any "air time" lost

Here are the instructions to be read aloud to your participants.*

1. "Objective of this experience is to bring alive some episode from the dust of the historic past, to resurrect it and live the experience as did the living human beings who went through it and lived through it. It is the writer's belief that by means of the method we'll work together here, we can make that past event, or any other area of understanding, as real for us as it was for those who first experienced it, and that this will be for us both an unforgettable learning and a quality of rich understanding well beyond anything we knew before of that historic event.

2. (Reader: You can reword this paragraph at your pleasure to suit any other instructional or presentational situation.) "Whereas in your own classrooms, all students might be going through the same history episode at the same time, here we can all go through different events if you wish, even a different event than your partner goes through, though you can go through the same event as your partner should you wish to. Please decide now which event in history you will revisit today. This can be any historic event so long as it is your choice. It could be, for example, the time when Brazil transformed itself from a monarchy to a republic, or when Portugal won her independence back from Spain, or when the War of the Triple Alliance broke out, or when Solon ended tyranny in Athens, Greece, or when the Persian Cyrus freed Israel from captivity, or when Simon Bolivar's dream of a free united Latin America shattered into ruin.** Your choice can be any historic event, whether one you know something about or one that you think you remember nothing about. Please pick out some particular historic event now to be your personal experience in this exercise."

(Reader: Pause a few moments, make sure that everyone has chosen however arbitrarily some specific episode from history. Then continue with this orientation.)

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*Anyone who might read these steps of instruction to his or her own class or group: We recommend recording these instructions on tape first, with the appropriate intervals and pauses, and then playing back that tape to guide you through this experience, to get the best feel for guiding your class through your instructions afterward. Note: It needs to be you and not the tape, to guide more than 8 people at a time, because you are a live presence!

**Four of these five examples selected because the audience and conference were in Brazil.

3. "Some years ago the writer discovered that each of us has ready a fully-equipped theater in our mind's eye, that each of us can give ourselves a fully multi-sensory experience of any event, and not just some of us, all of us. Even people who have never before consciously experienced a visual mental image, if they close their eyes and keep their eyes closed and describe something beautiful aloud to a listener...with closed eyes describing to their listener that beautiful scene or object in rich details of color, shape, position, movement, texture, smell, touch, whatever...if you describe something beautiful in that rich detail while keeping your eyes closed, you will soon find yourself looking at what you are describing. Describing in rich detail to a listener while keeping your eyes closed will bring any situation or event alive in the theater of your mind's eye; not only the sights but the sounds and all the senses. Everyone of us already has all the expensive audiovisual equipment we need right within us!"

4. "To get the theaters of our minds well into action, I will soon ask you to describe several different things in that kind of rich detail, and then once our mind theaters are lit up, we will go on from there into the episode of history that you have chosen."

5. "The way I will ask you to describe the things I'll mention for you to describe is in such rich sensory-evocative detail of color, texture, shapes, position, movement, texture, smell, taste, every sensory detail you can imagine, that you force the utter reality of what you are describing into the experience of your partner. Meantime your partner will, through sheer rich detail, be trying to force the utter reality of what he or she is describing into your experience. You might end up seeing each other's experiences and that can be fun to play with, but mostly orient on your own experience."

6. "Also the way I will ask you to describe things to one another is this: that you do not politely wait for each other to take turns. Instead, that one of you charges in with as much description as you can and when you have to pause for breath, the other of you rush in with description of your own ongoing experience and when you have to pause for breath the first of you rushes back in again with more description. Don't allow any empty 'air time' to lapse between you, because this is a cumulatively building experience and the more describing you do, the more alive this experience is going to become for you."

7. "And once we start, I will ask you to close your eyes and to keep them closed while describing things to your partner, while your partner is describing to you and even when I am giving you further instructions as we go step-

by-step through this history experience. That is why I got your agreement on how we use this (waterglass or other toning device) so I can give you specific building instructions step-by-step through this entire episode without ever stopping the actual experience."

(Reader: See if there are any questions, address them as best you can at this point but not for very long. Then continue.)

8. "Now let's close eyes and keep them closed while I attempt to help you set the stage and then give you something specific to describe to each other. History, just as it is now going on all around us, at the time and place you have chosen for this experience was an experience of live human beings like you and me. Sometimes suffering, sometimes triumphing, more often just surviving, human individuals like you were in the middle of such events. Not just dry names and dates from the pages of a dusty history book, these were events originally written in a powerful and meaningful richly human context. Sometimes historical events were crushingly immediate to the people caught up in them; other times there was so much at the time going on in immediate attention that people didn't realize until long afterward that they had lived through or even helped to create history-making events. What an adventure if we could recall and rediscover history as a profoundly human situation!"

9. "To begin with, with closed eyes, let's imagine now being in a strange but exquisitely beautiful garden. Anyone can describe a garden, whether or not you are actually seeing one, but let's make this a uniquely strange and beautiful garden like none you have ever seen before. Around at least one side of that garden will be a wall, and we can imagine a closed gate to be set in that wall. And let's describe your garden as richly as if you were actually seeing it, and make your garden utterly real to your partner through the sheer rich detail of your description. Make up your descriptions until you notice images in your mind's eye. Whenever you notice images in your mind's eye please switch to describing them instead of describing the things I ask you to describe, however surprising some of these images may seem and regardless of what you might think you ought to be seeing. But begin with the garden until your mental images come, a strange and beautiful garden with a wall and closed gate on at least one side of it. With eyes kept closed, begin with describing what's directly in front of you in this garden, work your way around it bringing more into view. What's directly in front of you in this garden? Please begin describing to your partner, making your garden scene utterly real to each other. Please begin describing now!"

(Reader: Allow 3 to 5 minutes after launching this step, depending on how the experience is running. Check around to make sure that each person is actually participating, but undermanage rather than overmanage, making sure not to intrude on anyone's experience. One or two may need a little extra persuasion to close their eyes and to describe out loud. You may be surprised to discover that if you, yourself, picture or imagine an exotic beautiful garden for a minute or so while this group experience is running, your silent experiencing will improve this group experience, more than seemingly can be accounted for just by the improved quality of your instructions to the group thereafter. After 2-3 minutes, any momentary lull in the buzz-murmur of the group is your cue to sound your chime or waterglass once and say:

"Continue as you are going, but a half-minute from now be ready for the next step. Please continue now."

(Reader: A half-minute or so later, or with the next momentary let-up in the buzz-murmur, end this step by sounding the chime or waterglass agreeably several times, and then say,)

10. "Thank you, good, please keep eyes closed to see more freely, stay with this experience as we move on further with it...If you've not already begun to move around in this garden, let's do so now as we add to what you are finding here. Describe not only what's in front of you in this garden or in whatever this garden experience has become for you--not only what's in front of you, describe what's to your left, then to your further left, then further left still until you've scanned all the way around you seeing all of what's there in that scene or garden. Also imagine moving through this garden or whatever this scene has become, moving from place to place in this garden or scene or if you've already noticed actual visual images and switched to describing those images, begin interacting with those images, to bring more into view, and describe the sights that this moving around brings into view. Make these further aspects of your experience utterly real to your partner as you resume describing now..."

(Reader: Allow 2 to 4 minutes, following the same parenthetical instructions as after Step #9 above. Half-minute's notice. Multiple bings, then say,)

11. "Thank you. Let's imagine--or maybe by now we can picture--a wall around one side of this garden or around whatever this scene has become for you. Imagine or picture a closed gate set in that wall. Let's not see past that wall and gate quite yet--but when we get to the point where we open the gate and step through, that will

open directly onto what will best display your historical episode, the time and place and circumstance you've chosen, the time and place of view that will best show us that historic event in a powerfully human context. Instead of what you think you ought to see beyond that wall and gate, if you can, please allow yourself to be surprised by whatever impressions you do find beyond that wall and gate. The more surprising your impressions are to you, the more likely they are to show you what's important to see--in fact, when the time comes, we will use suddenness in opening the gate to try to catch those impressions by surprise and to get beyond what we merely expect to see. So for the sake of that suddenness and surprise, for now let's not yet see past that wall and gate, but let's turn toward that wall and gate. Study not only the appearance but the feeling and texture of that closed gate and wall, imagine the feel of your hand on it or even lean your forehead up against it, study the feeling. Please make the appearance, the feeling, any other details of this garden wall and closed gate utterly real to your partner as you resume describing now...."

(Reader: Same parenthetical instructions as following Step #9 above, allowing 2-4 minutes. Half-minute's notice...multiple "bing" and say,)

12. "We have the best chance of seeing something surprising if, a minute from now, we open that gate very suddenly and step through, and go with describing our very first instant impression of what's on the other side of that gate, whether or not at first we think that this impression has anything at all to do with what we think we're supposed to be seeing. Once we do open the gate, go on with describing your very first surprise impression, at least your very first impression, of what's beyond that gate, starting with what's directly in front of you and then as you move forward bringing more into view, what's to your left and to your right as well, making what you find on the far side of your gate utterly real to your partner. Let's prepare now to open this gate and step through as I count to 1--3...2...1! (lightly snap your fingers or tap the chime for emphasis)--first impression: what's directly in front of you? Please resume describing now!"

(Reader: Same parenthetical instructions as after Step #9 above... then say,)

13. "Whatever people you've seen or can now find in this scene, pick one and make this one particular person utterly real to your partner in the same way by describing in rich detail. Make your partner literally feel the presence of this person through the detail and power of your description. Please resume describing now..."

(Reader: Same parenthetical instructions as after Step #9 above... then say,)

14. "Good...it's one thing to see this person, another thing to experience as if you yourself are this person. To get inside the experience of what it is like to be this person at the point of history you have chosen, please stand this person at arms length from you and with his or her back to you. To bring yourself to the point of experience where you experience this same scene you've been describing but through and with the eyes and senses of this person--to bring yourself to this point of experience, simply imagine wafting your body forward into the body of this person. Or, to make this stronger, imagine being behind this person and gently cupping your hands over his or her ears, gently lifting the head and slipping it on over your own head like a helmet, pulling on the rest of the body like a rubber suit! Either way now, quickly bring yourself to the point of experience where you are now virtually this person, wearing the head and body of this person. As this person, look on this same scene but through and with this person's eyes and maybe be surprised by what this person is seeing in this same scene as compared with what you had seen. Hear the sounds of this situation through and with the ears of this person, experience this scene richly through and with the ears of this person, experience this scene richly through and with this person's senses, body, mind, memories, recognitions, values, goals, perspectives, perceived stakes in this situation--what this person feels to be at stake. Make utterly real to your partner the somewhat surprising differences in what you now perceive of this scene, as this person, as you resume describing now..."

(Reader: Same parenthetical instructions as following step #9 above...then say,)

15. "Good, thank you, continuing further into this experience as if you were this person, continue as this person a little longer, run back through the memories of this person to revisit some of the things which led to this event or situation, and to discover why this person feels the way he or she feels toward this situation. Make utterly real to your partner these observations, these feelings of your person, and the reasons for those feelings, as you resume describing now..."

(Reader: Same parenthetical instructions as following Step #9 above. If the feelings get a bit much for someone, privately remind him/her that this is a theater-type experience, like needing a hanky at the movies or over a poignant novel and that people actively seek out such emotional theater experiences instinctively knowing how good it is for them to "clear the air." Usually, if an emoting person knows he is free to stop, he will continue until release is complete; in the event he does not, lightly encourage him/her to remain as listener for his/her partner--else you serve as listener, or look around and quickly match up two such "orphaned" partners. Do not try to stop anyone's emoting--rather, encourage them to continue until they feel freed. Chances are, no one will be that much affected but if they are, handle them supportively, quietly, quickly, sympathetically and in such a way as to prevent any interruption of the experience of the other participants. Remember the thesis that at least some of this emotion not only brings the history episode alive, but makes it unforgettable--and history itself an immensely more meaningful and attractive field of study for your participants. At the appropriate point, say:)

16. "Good, thank you, continue a little further into this experience. Now let the situation unfold; move forward a little in time as the situation around this person goes forward an hour, a day, a week, a year, however long, examining how this person feels toward these events and why this person responds to these events the way he or she does. Still being virtually this person, make these further events and responses and feelings utterly real to your partner as you resume describing now..."

(Reader: Same parenthetical instructions...then say:)

17. "Thank you, eyes still closed, let's separate again from this person. Project a warm feeling of thanks to this person. If appropriate, give this person a handshake, an arm around the shoulder, a pat on the back or a hug...Now please think of some question you would like to ask this person which would give you some further understanding of what has happened...Good, in a moment I will suggest that you ask this person that question, softly, out loud, but in your mind very loudly, then look and listen as intently as you can to see or hear the answer. The answer may be a change in the scene, or it may come in words, or your person may merely point to something. Let yourself be surprised at what may come up as your answer. Now, please ask your question, softly out loud, but in your mind very loudly, ask it now...(15-30 second pause)...Good, now look or listen intently for the answer and report your impressions to your partner as you resume describing now..."

(Reader: Possibly your participants will need a slight further nudge to "resume describing now, please, going with your first impression..." which nudge can be given if the buzz-murmur hasn't picked back up after 15-20 seconds. Otherwise or after, the same parenthetical instructions as following Step #9 above, but for 60 to 90 seconds instead of 2-5 minutes. Then say:)

18. "History goes on around us today, some of it obvious and some of it subtle, but all of it a live human drama with real people caught up in it and making it happen. Many times in your life will you yourself experience history in the making. Perhaps sometimes you yourself will be making it. Perhaps by learning what history has already taught us, we can create a fresh new and better history to live forward in. What are some of the things that this particular episode of history may have taught us?"

(Reader: And there you are, off and running on the follow-up group discussion, in which you can compare the power and sophistication of the intellectual observations of "the lessons of history" with those of any class you've ever been in! If you still have more than 20 participants by this time and enthusiasm is high and if there is time, you may want to have participants leave their partners and group themselves in fives, or stay with their partners and group themselves in sixes, each "buzz-group" to quickly devise a list of "lessons" or wise observations, and the bases for those lessons or observations, coming out of the experiences reported within those groups. If you use such buzz groups you may wish to continue use of the waterglass to keep the session focused and moving and to bring it to a well modulated conclusion. Be prepared for this session to end with far more as-yet-unanswered questions than it ever began with!

In any event, have fun! And get the sense of your audience on:

( ) Whether the experienced episode in history now has more meaning to the participant than before;
( ) Whether more is now understood from that episode than before, including its "lessons" relevant to our own time;
( ) Whether this episode, compared with other conventionally taught-about or read-about events in history, is now virtually unforgettable;
( ) Whether participants felt their limbic systems to be aroused and involved in this experience, compared to conventional learning experiences;
( ) Whether participants would like to begin experimenting with, perhaps adapting or inventing procedures similar to this one for limbic learning in their own classrooms. (Note for literature teachers: Virtually the identical procedure as above is used in "Literary Sortie," a way of visiting/revisiting a human situation in a short story, a novel or even a poem; just change a few words in the orientation and wherever "history" is mentioned in this procedure script.

( ) Whether apparent such "limbic learning" yields educationally superior results--and whether as much superior result would be there if the limbic, emotional feeling had not been involved in this kind of experience.

The writer would deeply appreciate a report back on the results and experiences of this procedure.

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Un exemple d'apprentissage limbique.

On exprime un certain soutien pour la thèse du Professeur Machado en ce qui concerne le rôle primordial du système limbique dans l'apprentissage et dans le comportement intellectuel en général. On a essayè une démonstration pratique d'apprentissage limbique apparente avec l'assistance.

Ein Beispiel von limbischem Lernen.

Die These Professor Machados von der hervorragenden Rolle vom limbischen System im Lernen und in geistigen Tätigkeiten im allgemeinen wird hier teilweise unterstützt, und eine praktische Beweisführung von scheinbar limbischem Lernen wird mit den Zuschauern versucht.

Un ejemplo de aprendizaje límbico.

Algún apoyo se expresó para la tesina de Profesor Machado sobre la parte preeminente que el sistema límbico tiene en aprendizaje aparentemente límbico se intentó con el público.

J. of the Society for Accelerative Learning and Teaching, 1985, 10(1)

BOOK REVIEW

Using Your Brain--For a Change

by Richard Bandler
edited by
Steve Andreas and Connirae Andreas
Illustrations by G. Russ Youngreen
Moab, UT: Real People Press, 1985.

John Senatore
University of Southern Colorado

Are you a person who wants to learn how you--not rats, dogs and pigeons--learn and can learn with speed, ease, joy, increasingly free to choose and change your experiences? Then read this book for laughs, stimulation, the most specific how-to's yet written and to introduce yourself to the missing technology: How to run your brain for more excellence and ecstasy.

Lozanov wrote, "All information is associated, coded and symbolized." What do you make that mean? Specifically, how to you make that mean? Do you repeat words inside yourself? See pictures? Feel about internal sounds and pictures? To understand Lozanov's statement we need the neglected science: The study of the structure of subjective experience. John Grinder and Richard Bandler founded that science.

Lozanov recognized the prevalence of suggestion in human living; that we are more than we have been taught to believe we are; that what one human can do with memory is available to all members of the species; that we learn globally; that we learn consciously and unconsciously; that humane and harmonious, non-specific mental reactivities (primarily found in the arts) reach us through a shorter path than logical facts and arguments. Americans adapted some of Lozanov as Suggestive Accelerative Learning and Teaching. Has the focus been suggestion? Accelerated? Learning? Teaching? This review of the "what" must continue in our information-processing with "So what?" and "Now what?" Specifically, how inside our heads do we associate, code and symbolize Lozanov's information? Bandler and Grinder co-created the study of the process all humans use for encoding, transferring and modifying behaviors with the objective of providing the human species with more behavioral choices. "We believe that the more choices and possibilities the members of our species become aware of and make available to themselves, the more we will advance as a whole." A key component of Grinder-Bandler's science: Representational systems are the building-blocks of behavior.

Perhaps, like me, some of you came to Suggestopedy and SALT with an inner cry for how's: How to make things happen in teaching-learning situations with trust, joy, ease, respect for individual differences among universally shared characteristics, and, most of all, for effective means to design learning-systems so that behaviors change. I learned suggestions do initiate changes; so does incorporating a well-designed, integrated learning system implemented by teachers skillfully trained differently; I learned that music makes a difference; so do arts, attractive learning settings. I included in my living Lozanov's maxim, "No one is entitled to deny a science that is unknown to him." My limited successes, my mistakes did not satisfy that insistent inner cry for how's. How do I find out what people are doing inside their heads? How do I help people do different things inside their heads so their experiences and behaviors change? Bandler and Grinder's books began to reply to my inner cry.

This owner-operator's manual to your brain has been excellently compiled and edited from transcripts of Bandler talks and workshops. Editors Steve and Connirae Andreas this time give us recent information about submodalities of representational systems governing our behaviors; they help in banishing the suggestion that it takes fifty years for a new idea to enter the classroom. Bandler co-founded the science of Neurolinguistic Programming (the science of changing maps of reality) as a model of communication and change that increases the possible outcomes of our behaviors. He has been a genius pouring out faster, newer, more effective and specific tools. Learning with Bandler, we can test these tools and use them to represent, order and sequence (through language and our sensory representations) the models and strategies that empower us to achieve specific outcomes. This book reveals some of Bandler at his best.

Lozanov states that the imperative for the instructor is "teaching students how to learn." Who taught us how to learn? Schools have been places where those who can show they can and those who can't show they can't--instead of places where those who can't more and more become those who can. Strong arguments are made for different teacher education; who knows how to teach teachers to learn and teach others how to learn? This book satisfies my inner cry for a person to show us how we learn and how to use our learning achievements differently to change our experiences.

In "Who's Driving the Bus?" (Chapter 1), Bandler interweaves stories with information about how our brains work.

> Most people are prisoners of their own brains. It's as if they are chained to the last seat of the bus and someone else is driving. I want you to learn how to drive your own bus. If you don't give your brain a little direction, either it will just run randomly on its own, or other people will find ways to run it for you---and they may not always have your best interests in mind. Even if they do, they may get it wrong!

"I'd like you to try some very simple experiments to teach you a little bit about how you can learn to run your own brain," opens Chapter 2 (Running Your Own Brain). "You will need this experience to understand the rest of the book, so I recommend you actually do the following brief experiments." Bandler introduces the smaller elements (submodalities) of our visual representational systems insisting, "I want you to have a personal, experiential understanding of how you can control your experience...If you think you don't have the time, put this book down, go to the back of the bus...." Bandler's stories again evoke and provoke. Noting the subjective structure of a statement made by a depressed person, he says, "The structure of what he's saying is this: 'I've coded my experience such that I am living in the delusion that I have been in the same state of consciousness for sixteen years. I know he hasn't been depressed for sixteen years." Bandler has said, "Tonality is everything" referring to submodalities in our auditory representational system. Lozanov wrote: "Intonation is one of the elements of double-plane behavior. It also has marked significance for the build-up of authority and the establishment of the suggestive connection."

In Chapter 3 (Points of View), Bandler notes that people have been talking about points of view for centuries, always thinking of it as metaphorical, rather than literal, so "They didn't know how to give someone specific instructions to change his point of view." Lozanov uses points of view when he has learners adopt a role in foreign language lessons. Bandler takes participants through several ways to change points of view. Lozanov noted associated states. Bandler has participants work with associated and dissociated states. "Teaching someone how, and when, to associate or dissociate is one of the most profound and pervasive ways to change the quality of a person's experience and the behavior that results from it."

Going Wrong (Chapter 4) shares powerful, humorous and painful stories of persons trying to correct problems after something has gone wrong instead of doing things ahead of time to make sure they go the way we want them to. "If you feel there's nothing you can do about it, you're right--until you go inside your brain and back up, back up, back up so you can move forward and go for it *another* way instead of perpetuating what doesn't work by doing it louder, harder, longer, more often." Re-read this chapter for how experiences can get associated and sequenced--and changed with a little brain direction.

Working primarily with submodalities in our auditory representational system, Bandler in Chapter 5 (Going For It), introduces motivation strategies "so you can have some control over what you're motivated to do." In Chapter 6 (Understanding Confusion), he emphasizes working with *process* as he has participants elicit states of understanding and confusion since "Confusion and understanding are internal experiences. They don't have anything to do with the outside world...Confusion is an opportunity to rearrange experience and organize it in a different way than you normally would. That allows you to learn and do something new and to see and hear the world in a new way." In differentiating kinds of understanding, Bandler shows how we stick ourselves, and "The only kind of understanding I'm interested in is the kind that allows you to *do* something.

Chapter 7 (Beyond Belief) begins: "Another way to think about behavior is that it's organized around some very durable things called beliefs...The word 'belief' is a somewhat vague concept to most people, even though they'll gladly go out and kill for one...I'd like to demonstrate what beliefs are made of and then show you a way of changing them." This chapter includes a demonstration, directions for participants to do work in changing beliefs, sharing discoveries made by applying this technology: "I have a hard time believing that it could be so easy to do."

Chapter 8 (Learning) contains Bandler's observations on some of the ways the existing educational system is failing including educators who know an area, do something well and do not know how they learned, learned to do; or how to help someone else learn. Feeling bad in response to school situations can be changed rapidly by using a number of the techniques described and demonstrated; among these would be school phobias (like math anxiety), reading, spelling and other learning disabilities, and drugs.

The submodality pattern that programs our brain to go in a new direction is "The Swish" (Chapter 9). Bandler demonstrates how to "get compulsed to be more of who you want to be," instructs participants on how to do it with each other, takes feedback and questions. This is definitely a do-it chapter--and do it again, again, differently, and again. "The important thing to understand about the swish pattern is that it sets the person in a direction that is generative and evolutionary...it keeps them (sic) on the track of going toward what they want to become. To me, setting that direction is the biggest part of what change is all about."

The Afterword differentiates doers from "knowers," and that "This is not a set of techniques; it's an attitude...that has to do with curiosity, with wanting to know about things, wanting to be able to influence things, and wanting to be able to influence them in a way that's worthwhile." Bandler reveals, again with seemingly devilish stories, that he is a voracious learner. "The essence of being generative is to create a world in which everybody gains because there are ways of creating more, rather than having a limited amount to fight over and divide up."

The Appendices contain listed submodalities for our three primary representational systems that build our behaviors, equations for practicing learning discussed in Chapter 8, a selected bibliography of books containing other tools and techniques developed by Bandler and Grinder, notices of available video cassettes, and an announcement of New Learning Pathways (Denver, educational consultants, who guarantee in eight one-hour sessions to achieve a minimum of one-year's progress in phonetic analysis, word and passage comprehension as measured by two well-known reading tests.)

Lozanov wrote: "The main aim of teaching is not memorizing but the understanding and creative solution of problems." And what is the aim of learning? Notice what happens when you redirect your brain this way: "What are they going to learn today? instead of "What am I going to teach today?"

Bandler repeatedly says, "I always keep in mind that anything anybody has done is an achievement, no matter how futile or painful it may be... People aren't broken; they work perfectly! The important question is, 'How do they work now?' so that you can help them work perfectly in a way that is more pleasant and useful."

Instead of reading another book about your brain and how it could/should work--why not do this book instead? You can read it to enjoy and be provoked by genius; or read it to experience your non-specific mental reactivities to his teaching stories; or to whet your curiosity about the technology of subjectivity so central to human teaching/learning. Read it to learn where you are on the bus, for when you take the driver's seat, you still have to ask, "Where am I driving this bus to?"

We can choose again, do anything another way, and this book requires we practice using our brain for worthwhile and desirable changes. For, as Bandler says:

> There is so much more inside our minds than we suspect. There is so much more outside than we are capable of being curious about. It's only the growing sense of curiosity that allows you to capture the enthusiasm that makes even the most mundane, or the most fascinating task worthwhile, fun and intriguing. Without that, life is nothing more than waiting in line. You can master the art of tapping your foot while you wait in line, or you can do much more...You'd better have some fun now because those who enjoy themselves and do things that are worth doing with a great sense of curiosity get to stand in a shorter line than those who only developed the ability to wait in line.

J. of the Society for Accelerative Learning and Teaching,
1985, 10(1)

BOOK REVIEW

The Intuitive Edge:
Understanding and Developing Intuition

by Philip Goldberg
Jeremy P. Tarcher, Inc., distributed
by Houghton-Miflin Co., 1983.
Paperback: Spring, 1985.

John Senatore
University of Southern Colorado

Yes, let's do it now.

Suggestopedy and SALT have intuition as a component. Up to now, this component is a nominalization, not processes specifically described and clearly sequenced to help us access our range of human capabilities. Goldberg's book helps readers specify multi-meanings, distinctions, contexts, cultural and historical biases, automaticities, functional types, some models, experiences, practices and the need for and importance of intuition. Author of seven books, Goldberg holds degrees in industrial psychology and interdisciplinary education. His book may help us sensitize ourselves to our criteria for and our understanding of intuition, may contribute to our discovering transcendental intelligence at the intuitive edge, and he invites us to explore a better way of knowing that is part of our global shift in values. Definitely, Goldberg urges us to educate for the critical balance between rational thinking and intuition that will make every thought and action resonate with deeper truths.

But first, what of Suggestopedy? Lozanov wrote:

> In its interrelation with the environment, the organism has worked out a number of self-protective devices....A profound psychological analysis of a number of suggestive situations shows that outside the scope of the conscious critical thinking there is also an unconscious intuitive-affective barrier against any suggestions entering the mind....The intuitive-affective anti-suggestive barrier rejects everything which fails to create confidence and security.
>
> Suggestology and Outlines of Suggestopedy, pp. 164-165

Lozanov places intuition in the paraconscious (footnote, p. 161). In discussing NMR (nonspecific mental reactivity, p. 161), Lozanov wrote:

> Since their (children) conscious logical recoding mechanisms are not yet developed, they rely on intuitional insight which is created by NMR....In primitive man this intuitional insight also played a guiding role. It has features that have a great deal in common with instinctive insight of many animals.

Lozanov alludes to extrasensory perception as related to suggestology and realized in the paraconscious mental activity; he suggests that intuitive creativity is a paraconscious activity. That suggestion creates and utilizes setups which can free and activate the reserve capacities of human beings is central to Suggestopedy, including these suggestions about intuition.

Readers of Ostrander and Schroeder's SuperLearning may remember Chapter 14: "The Well-Tempered Hunch: Professional and Personal." In their book, intuition includes precognition and utilization of dreams. "The more you get into the swing of intuitive thinking generally, the more you realize many of us were saddled with a misconception," they wrote on page 205. "Extrasensory talents are extra channels of information," for them. Noting we have developed a "lop-headed culture," these authors urge: "The answer is not to become lop-headed in the opposite direction, but to nurture harmony, a balance between the two, so that we may function as whole people with more flags flying."

So, is intuition talent? Part of our paraconscious? Psychic, extrasensory channels? A self-protective device? Hunches? Instinctive insight? A particalized reification? Functions? Goldberg's book helps sort out answers to these questions, and, more importantly, examines some of the presuppositions in the models these questions and answers came from.

In Chapter 1, Goldberg challenges the dominant model: reason vs. intuition. "We are led to believe that the finished product depicts the actual process," he wrote, pointing out that science abounds with flashes, hunches, sudden insights, despite censored versions presented in books that lead us to mistake scientism with a scientific method. "Then we are advised to emulate this not very usable fiction." Dominance reveals automaticity in the primary way we represent our experience to ourselves, our language: "People demand reasons... They seldom say, 'Give me one good feeling...' or 'What are your intuitions about...?'" Relax this dichotomy, Goldberg urges, for "Creativity is a counterpoint of hunches, reasoning, hunches."

Checking definitions and making distinctions in Chapter 2, the author asks: Is intuition merely fast reasoning, or is reasoning slow intuition? What of "psychic" phenomena qualifies as intuition? Not telepathy, not clairvoyance and clairaudience; only precognition. Is intuition inference? Insight deserves the appellation of intuitive only when steps taken were neither conscious nor deliberate.

Chapter 3 presents six functional types of intuition and how they might interact with each other and occur in various combinations to comprise ordinary intuitive experience. Goldberg maintains in Chapter 4 that everyone is intuitive and urges us to check stereotypes like women/kids are more intuitive when we ask, "What is an intuitive personality?" Some SALT practitioners may be interested in examining what he has to say about Jungian types, the Myers-Briggs Type Indicator and Westcott's Intuitive Problem-Solving Scale.

"Right Brain, Wrong Theory" (Chapter 6) shows oversimplifications perpetuated by labeling one hemisphere analytical, one intuitive. Chapter 7, "The Intuitive Mind," presents a hierarchical model of the mind and alludes to the uncharted depths of the mind. Here Goldberg connects Jung's concept of the collective unconscious, Rupert Sheldrake's theory of formative causation and Plato's archetypal forms. "Getting Ready for Intuition," Chapter 8, offers models and exercises for our experimentation. "Turning Off to Tune In," Chapter 9, contains an author preference for meditation and yoga (another thing he shares with Lozanov)--"stretching for intuition." "Forego it, or Go For It?" Goldberg asks to invite our choice; he provides in this chapter questions for checking intuition, a validating process, and an invitation to start "The Intuition Journal." As for future research, Goldberg prefers the area of higher consciousness "since the mind's potential far surpasses its current state of development." Exploring the highest state may be the best way to nourish other states. "We need to find out the precise physiology of transcendence and higher awareness and the best methods by which they can be cultivated. When we understand the highest expressions of human knowledge, we will better understand how we know anything."

"We need not just have more intuition, but better intuition," Goldberg insists. Our immediate need now is critical. We can do lots to develop our own and others' intuitive functions and "make the world safe for intuition. If we succeed, intuition will make the world safe for us."

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J. of the Society for Accelerative Learning and Teaching, 1985, 10(1)

BOOK REVIEW

Sound Therapy for the Walkman

by Patricia Joudry
Foreword by Yehudi Menuhin
St. Denis, Sask.: Steele and Steele, 1984.

John Senatore
University of Southern Colorado

"The Tomatis method and Suggestopedy: A comparative study" by W. Jane Bancroft in the Journal of the Society for Accelerative Learning and Teaching (Volume 7, No. 1, Spring, 1982) comprehensively introduced more persons to Dr. A. A. Tomatis, Paris, a former ear, nose and throat specialist whose investigations into the effect of sound upon the human mind have brought him high honor and recognition. Now Patricia Joudry, novelist and playwright, shares her personal transformations with audio-psycho-phonology, which she considers to be one of the great evolutionary discoveries of the age.

In the Foreword, Menuhin wrote that "this therapy is exploring a fascinating new approach to the inner human being....Sound goes directly into our bodies. What the aural can do to the inside of our brain, to the 'within' of our lives, nothing else can do." Joudry uses Chapter 1 (The Sound Effect) to introduce Tomatis, sound therapy, and entice us to know more. "It is therapy, but you needn't be ill....The sound is the music of Mozart, Haydn, Bach and other classical composers...and the method is the Sony Walkman." No more great costs of time and money for those persons wanting results from the Tomatis Effect.

Chapter 2 (Plugged into the Cosmos) is biographical; we learn how Joudry came to sound therapy, her healings and growth, her experiences at St. Peter's College--and the birth of sound therapy for the Walkman. In Chapter 3 (The Tomatis Effect), Joudry details non-technically more about Tomatis' theories, successes and research. Chapter 4 (Sleep) contrasts research on necessary sleep and sleep as refuge and escape. The ear hears and recharges the cerebral cortex, so "Sound therapy is only for people who want more time in their lives...."

Chapter 5 (How to Listen) tells that we are listening to filtered music processed through Tomatis' Electronic Ear. Documented results of sound therapy include: shortened, more efficient sleep; new vitality; obliteration of tiredness;

deep relaxation; relief from anxiety; improved hearing; weight loss; curing hearing and speech disorders; heightened creativity and memory, concentration, learning.

Chapter 6 (Case Histories) contains testimonies, and Chapter 7 (The Facts) is for "those who are hesitant or frightened to try something new...."

Sound therapy has begun to make its way into Canadian schools, Joudry reports. Feedback: better learning, less stress, improved behavior both at school and at home. With all the plugged-in persons we meet, these cassettes offer recharging, therapeutic alternatives for people to hear and influence the within-of-their-lives. Does sound therapy deserve examination, consideration? Better yet: Why not test it yourself? I am.

J. of the Society for Accelerative Learning and Teaching, 1985, 10(1)

BOOK REVIEW

Whole-Brain Thinking: Working from Both Sides of the Brain to Achieve Peak Job Performance

by Jacquelyn Wonder and Priscilla Donovan
William Morrow & Co., Inc., 1984.

John Senatore
University of Southern Colorado

In a readable and stimulating book, the authors fulfill their purposes for their intended readers: Introduce managers to the how's and when's of combining detail and logic with intuition and synthesizing; how to recognize some thinking styles of other people so these may be adapted to or altered; how to discover some of an organization's thinking styles and modify jobs within it.

"Whole brain," "left brain" and "right brain" refer to styles of thinking. Arguing from the need for all persons to use more thinking styles, the authors present Jacquelyn Wonder's practical exercises claimed to have improved communication, listening, memory and management skills, while reducing stress and frustration, for innovative corporations. Wonder, a management consultant who conducts workshops on whole-brain thinking, co-authored the book with Priscilla Donovan, program director in the Division of Continuing Education, University of Colorado at Denver. Recognize, adopt the appropriate style to the context, and use easily more of our "brains" the authors emphasize.

Tantalizing are their exercises leading persons to experience right-brain and left-brain shifts. Part 1: Brain and Performance (Chapters 1-3: The Split-Brain Theory, Knowing Yourself--Right or Left, and Getting the Feel of Right and Left) distinguish this book. Managing ourselves, our classrooms, our offices, each of can, for example, ask, "Have I been left-brained? For how long? How can I shift, and know I've shifted, to right-brain?" These exercises are best used as launching pads--not as proofs.

Part 2: Mind Movers (Chapters 4-9: Internal Brainstorming, Cinematics, Inside Outs, Suspenders, Hearings: 1, 2, and Extra, and Uprights) provide more conceptual tools for our repertory to test, modify, adopt. For those persons with strong inner-cries-for-how, here is information worth studying, applying to self, then exploring with others. SALT practitioners may find confirmations, expansions and alternatives for their visualizations, guided imagery and creativity activities.

Part 3: Whole-Brain on the Job (Chapters 10-12) addresses a version of communications, listening, memory, management problems, stress and workload, and concludes with "The Bottom Line: You, Your Brain and Your Future in the Changing World." The authors apply consistently the frame of reference introduced previously in the book to these topics.

A "Black box" format, squares containing research information, allows for reading options while not necessarily interrupting the presentation. Illustrations and cartoons provide central visual support for points made--again tailored for their intended readers, as are their examples.

Lozanov is mentioned in one of the black boxes on "Twilight Learning," referring to suggestibility in the theta state as used by Thomas H. Budzynski, Director, Biofeedback Institute, Denver, where Donovan did brain lateralization research. "Educators who strive for a relaxed classroom environment may find support for their approach from the proponents of such techniques as Suggestology by Georgi Lozanov, SuperLearning by Sheila Ostrander and Lynn Schroeder, and Kiddie QR (quieting response) by Liz Stroebel."

What may be in this book for SALT practitioners? Depends on the practitioner. Purists may discount the book on the grounds that its intentions are somewhat different and that not enough similar presuppositions are shared between SALT, Suggestology and the authors. Suggestology, acclaimed for outstanding "memory" successes, does not utilize mnemonic devices. SALT stresses listening, but not as techniques and tactics. Wonder and Donovan illustrate with dialogues identifiable patterns used by left-brain and right-brain persons, thereby stressing rapport as does Suggestology and SALT. Central here: Matching must occur before communication begins. Repeatedly the authors maintain that we are operating from limiting assumptions and that we are all better, smarter, more capable than we believe, tenets held by SALT practitioners.

This book is for business persons, managers and would-be managers; it can be for all self-managers. In an age that doubts people want to be managed, some readers may avoid this book. For persons who insist that principles must be learned first and best and that tactics/techniques be de-emphasized, even avoided, this book may irritate. Professional persons who know as much or more than the authors may want to examine what information has been taken from whom, invented by whom, and put to what uses. Certainly this book is not for persons who seek "the" correct theory, "the" truth statistically validated under controlled conditions.

"Whole-brain thinking" may be current catchwords--and an important catch it is. Much of the time, the brain is not what is being talked about in these "practical" books except metaphorically; the references are to conscious/unconscious/paraconscious, analytical/intuitive, sequential/holistic, et al.--in short, ways we know, think, frame our experiences appropriately and inappropriately. Brain-books can be technical and readable only by a few; some of them make claims beyond fulfillment; other brain books come from persons searching, applying--falteringly and even erroneously--pieces of research, partial understandings to increase number of life-choices, lift limits, shift paradigms, aid in co-creating new models. SALT practitioners may find elements to disagree with in the book, elements that peeve and irk, and elements that invite trial, test, inclusion in living practices.

More brain-books appear. What message is being sent? The message seems to be: We need to help each other learn how to drive our brains. So, let's spend as much time helping each other learn to drive our brains as we do helping each other learn to operate food processors and automobiles.

Wonder and Donovan appear to be making their contribution.

THE JOURNAL OF THE SOCIETY FOR ACCELERATIVE LEARNING AND TEACHING

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THE JOURNAL OF THE SOCIETY FOR ACCELERATIVE LEARNING AND TEACHING

Guidelines for Contributors

The Editor welcomes submission of manuscripts on an interdisciplinary nature relevant to all aspects of suggestive learning-teaching-therapy counseling within the theoretical and procedural confines of Suggestology and/or Suggestopedia. The JOURNAL FOR THE SOCIETY OF ACCELERATIVE LEARNING AND TEACHING will publish a wide variety of articles - including critical reviews, theoretical analyses, speculative papers, case studies, quasi-experimental studies, as well as reports of empirical research (basic or applied) of major significance. The basic focus is Suggestopedia theory , research and application.

MANUSCRIPTS should be typed on one side of standard (8 ½ x 11 non-corrasable) bond typewriter paper, clearly mimeographed or multilithed. *Do not use ditto.* The original and three copies (carbon or dry electrostatic copies) should be submitted. Authors should also keep a personal copy to check against proofs. *All material must be double-spaced,* with ample margins (1 ½ in. on each side and 1 ½ on top and bottom). Any paper should not be longer than 20 typewritten pages, excluding bibliography, footnotes, tables, figures, etc. In special cases, longer papers may be submitted for publication.

REFERENCES should follow APA style. Authors should follow the standardized bibliographic format for reference citation as shown in the American Psychological Association Manual (1974). In the body of the text, the published work of others should be referred to by name and publication date in parentheses as follows, "Prichard and Taylor (1976) reported..." In the bibliography at the end, the referred-to articles should be listed fully in alphabetical order by author(s), title and publication source information as follows, "Prichard, A. & Taylor, J. Adapting the Lozanov method for remedial instruction. *Journal of Suggestive-Accelerative Learning and Teaching,* 1976 (Sum), 1(2), 107-115." Footnotes should be used to refer to unpublished material not generally available to readers, for example in the text, "Schuster claimed that relaxation..." A list of all footnotes should be typed on a separate sheet and placed between the end of the text and before the bibliography. An example of an entry in this list of footnotes is, "Schuster, D.H. The effects of relaxation and suggestions on the learning of Spanish words. Unpublished report, Psychology Department, Iowa State University, 1972, 6pp."

TABLES AND FIGURES should be kept to an absolute minimum and should supplement rather than duplicate text material. Each table should be typed on a separate sheet and be placed after the reference section of the manuscript. Figures should be submitted in a form suitable for photographic reproduction. Use India ink on a good grade of drawing paper. Photographs (black and white only) submitted as figures should be 5 x 7 inch glossy prints, uncropped and marked lightly on the back with a pencil. Submit all figures, photographs and tables with each of the four sets of manuscript materials.

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JOURNAL OF THE SOCIETY FOR ACCELERATIVE LEARNING AND TEACHING

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THE 12TH INTERNATIONAL CONFERENCE OF THE SOCIETY FOR ACCELERATIVE LEARNING AND TEACHING

Scheman Continuing Education Building
Iowa State University, Ames, Iowa
April 24-26, 1987

"The Quantum Leap: Impacting Teaching, Training and Teacher Education"

Call For Proposals

The 1986 SALT Conference was titled "The Quantum Mind: Educational Visions and Applications." We came away with a renewed vigor and purpose after hearing the messages of some very motivational educational leaders.

In 1987 we hope to build upon the motivation generated at "The Quantum Mind" by focusing on how our Society can impact teacher education, both preservice and in-service. Thus the name for our 1987 conference: "The Quantum Leap: Impacting Teaching, Training and Teacher Education." To this end we have invited Dr. Judith Lanier, Dean of the College of Education at Michigan State University, to attend and address our meeting. She has graciously accepted. Dr. Lanier is Chairperson of the Holmes Group, composed of representatives from major research universities, and a member of the Carnegie Forum Task Force on Teaching as a Profession. Both of these groups recently reported out. Their recommendations point to major changes on the horizon for teacher preparation programs and the profession. Dr. Lanier will share with us her vision for the future of American education, and the results of several years of research done at Michigan State by the Institute for Research on Training.

For SALT to impact upon teacher education, we must build on our research base and share the results with prominent educators such as Judith Lanier. For this reason, a "pre-SALT" research conference is also planned, to be held on April 23, 1987, one day prior to the main SALT meeting. We plan to attract SALT members and researchers from varied fields such as neurobiology, educational psychology, musicology, business training, curriculum and instruction, and teacher education representing elementary through higher education and continuing education levels. Dr. Lanier has also agreed to attend the research conference.

Another method for impacting on teachers is, obviously, to run training programs. At this time Lynn Dhority and Don Schuster have offered to run five-day programs immediately following the SALT Conference (April 27-May 1) to train teachers in SALT techniques. People desiring space for workshops or seminars commercially should call Elizabeth Jeska, Continuing Education, Iowa State University, 515-294-6222.

We are certain that there are others of us out there with ideas for pre- and post-conference programs. We have two small rooms reserved for April 20-23, with each holding about 50 persons. The same two rooms are also available on April 27 and 28.

Please send proposals for conference presentations (45 minutes to 1-1/2 hours), pre-conference research presentations (10-15 minutes), or other pre-conference or post-conference special interest group plans.

Please include:

1. Your name, address and phone number (also for co-presenters)
2. Title of presentation/workshop/etc.
3. Type of session (presentation, workshop, special interest group discussion, etc.)
4. Length of time needed
5. Educational objectives for the session participants
6. Style of delivery (lecture, discussion, interactive activities, role playing, etc.)
7. Anticipated audience (newcomers, old timers, everybody)
8. Media needs (audiocassette player, overhead, slide projector, videocassette player with monitor - please specify 3/4" VHS or Beta, etc.)
9. Outline of session content

The number of concurrent sessions during Quantum Leap will be kept to a minimum. To accommodate as many speakers as possible, we ask that you request either 45 minutes or 1-1/2 hours for presentations. We will also be having a Brown Bag Poster Session Luncheon to allow as many members as possible to present (and hopefully obtain travel funds), in a multi-table poster session style environment in the eating room.

We hope that you are as excited about extending SALT's impact as we are, and that you plan to participate in the Quantum Leap.

Send proposals to:

Dr. James Hand
Office of Med. Education
1601 Parkview
Rockford IL 61107-1897

J. for the Society of Accelerated Learning and Teaching,
1985, 10(2)

Orchestration of Internal Processing*

Renate M. Nummela, Ph.D.
California State University
San Bernardino, California
and
Tennes M. Rosengren, Ph.D.
Alvord Unified School District
Riverside, California

Abstract. Learning involves both external focusing and internal processing and the human brain shifts between these functions in a natural movement. By understanding more about how the brain works and integrating this knowledge with systems and methods that enhance this process, learning can be accelerated. This paper presents an integration of these two concepts in order to orchestrate better those natural internal processes that are so critical to learning and teaching.

* * *

The critical question being raised by new brain research is whether we are watching a natural phenomenon similar to that of the heart doing its job and of the lungs taking in air, or whether learning is the result of intense effort, strict discipline and careful programming for outcomes.

We suspect that we need to begin by stepping back and acknowledging the legitimacy of learning as it occurs naturally. This kind of "stepping back" requires a look at how external stimuli automatically affect internal processing. Only when we begin to look at what happens inside of the student as he or she is being presented with information can we begin to recognize teaching systems.

The teaching/learning process inevitably involves the receiving of external sensory input followed by internal processing. Examples of external sensory input could be a lecture, film, text reading, field trip, or for that matter, any event taking place in the real world. Each of these exposures to external stimuli ultimately results in some form of internal processing as the brain attempts to make sense of the externally presented input. As brain theory tells us (Hart, 1983; Luria, 1975; MacLean, 1978; Pribram, 1971), the brain is continually attempting to categorize and pattern new information with what is already stored in the brain. In other words, in an attempt to store new information, the brain "calls up" or matches, compares, and patterns incoming information with similar or perceived-to-be similar factors already in the memory of the individual. This is done at a very high rate of speed (Hart, 1975) and in an apparently random order, including conscious and unconscious levels. Thus, every externally experienced learning event will result in the calling up of meaningful, related information stored within that individual system. The brain functions in this way whether it is experiencing a random event in everyday life or a carefully orchestrated experience in the classroom. We suggest that the more meaningful, relevant and complex the external sensory input is, the more actively the brain will attempt to integrate and develop what Hart calls "program structures" or "prosters," which he defines as "a collection of stored programs, related to a particular pattern, such as walking, running, letter recognition and related concepts which can be used as alternatives" (p. 95). According to this definition, the most effective learning occurs when external sensory input challenges the brain to 1) "call up" the greatest number of appropriate programs, 2) expand an already existing program, and 3) develop new programs.

---

*Paper presented at 1984 SALT Conference in Houston, TX

It is important to note that the brain is actively engaged in this activity (calling up old prosters or creating new ones) regardless of external input being presented. In other words, the brain does not remain inactive when not fully engaged in learning specified new information. We speculate that the lack of involvement in specific learning results in the brain's less-focused patterning, which is experienced by the learner as random thoughts, feelings, physical sensations, daydreaming, fantasy, problem solving, creative inspiration and spontaneous memories. This type of internal processing occurs when external sensory input is insufficiently organized, motivating or meaningful to stimulate proster activity in the desired direction. The teaching process then becomes a matter of orchestrating external stimuli to influence related and focused internal processing.

Lozanov (1978) discusses the powerful influence of peripheral stimuli such as the temperature in the room, the teacher's appearance, the student's perceived meaning of the significance of the lesson, posters on the walls or perceived threat. He supports the notion that learning is occurring all the time at both a conscious and unconscious level, and when meaningful, comprehensive learning is not occurring, the brain will continue to engage itself in personally meaningful ways not necessarily related to the lesson or what the teacher considers learning. The brain continues to pattern and categorize but will do so influenced by random stimuli in the room. Instead of focusing on the lecture on railroad conglomerates, for instance, the student may focus on the teacher's red skirt and be reminded of what to wear to the dance next Friday or, perhaps, who will be there. Thus the student continues to match and pattern but in a direction not intended by the teacher.

Teaching Methodologies to Orchestrate Internal Processing

What kind of teaching, teaching systems and teaching methodologies lead to a more comprehensive focusing, desired patterning and creation of new program structures? We know already that the more senses we involve in the learning process, the more complex the matching and developing of programs. As Hart (1983) put it: "Because the ordinary classroom does not provide this richness in learning and in most instances limits what the brain can do, students become addicted or habituated to this limited, sequential approach" (p. 77). "School learning" becomes very different from real-life learning, and students are asked to adapt to very little when so much more could be available. As an example, we could contrast history classes focusing on specific facts and dates with classes where the teacher gives personally meaningful details. By using a story format describing actual events, suffering and dilemmas experienced by those living in specific times, emotions as well as cognitive intent are generated and thus both the left and right hemisphere are engaged. According to Levy (1983), "If students are emotionally engaged, both sides of the brain will participate in the educational process regardless of subject matter." Added to this, the telling of stories tends to relax the student, which may create more efficient functioning of the entire neo-cortex (Hart, 1983), leading to a particularly receptive or "open" state and a greater access to existing prosters. Lozanov comments on the significance of creating a more relaxed, "child-like" receptive-learning state. In *Suggestology and Outlines of Suggestopedy* (1978), he writes:

> In childhood new things are memorized more easily and, what is more important, without strain and effort. The memorization process itself takes an unconscious course in normal, calm perception. However, if the teaching is misguided, this normally spontaneous process in the individual development can involve great effort and strain. The natural mechanism of memorization is deformed. The maxim that everything can be acquired through work, although fundamentally true, is incorrectly understood and students get the idea that they must make extreme efforts to memorize (p. 197).

This child-like state creates an exceptionally receptive state for incoming information and supports the notion that a positive supportive environment and the absence of threat stimulates learning (the formation of new prosters). As Hart (1983) explains, the brain tends to "downshift" under threat. Shifting down means greater activation of the older brain which deals with reflexive behaviors and emotions (MacLean, 1978). Old brain-programmed behaviors and responses allow little room for reflection, insight, foresight and other more complex learning associated with the neocortex and development of new prosters.

Strategies for creating the child-like state and systems and methodologies that encourage the utilization of both hemispheres can be taught in teacher-education programs. However, creating a true child-like state (one that is free of threat) is far more complex than unconscious characteristics that the teacher presents to the student. "Teacher prestige," for instance, is a measure of the degree of respect and admiration the teacher can command. The word "command" here means "without overt demand" and is a natural outgrowth of the teacher's ability to express his or her knowledge of the subject matter and its relationship to other subjects and life experiences. Additionally, Ivan Barzakov, a former teacher in Lozanov Schools, states that all teachers, actors, physicians, i.e., those working with the public, must have what he refers to as the "dual plane" (personal communication, Optimalearning Workshop, 1983). The dual plane is a term used to describe a very complex set of characteristics, including the teacher's ability to generate trust and affection. This ability stems from a sense of genuineness, of "realness," of deep concern and integrity which the teacher projects at both a conscious and unconscious level. When these elements are detected by the student, they become powerful invitations to learning. With such a teacher, students are far more open and attracted to what is being said and done in the classroom. Such a teacher functions as a "magnet" and encourages appropriate patterning.

Ivan Barzakov has expanded on Lozanov's theories and teaching methods and has his own institute here in the United States (The Barzak Educational Institute in San Francisco). His entire teaching system is beyond the scope of this paper, but includes several "brain compatible" features. As an example, teaching is done in a series of "movements" where material to be learned is presented in a constant flow from the inductive to the deductive, and back to the inductive. The teacher begins with what Barzakov calls the "pre-exposure" to the subject. The Optimalearning pre-exposure acts as introduction and primary motivator and has some of the characteristics of Ausubel's "abstract organizer" (Ausubel, 1968). The pre-exposure could be a story, an experience, a guided imagery or concert reading (a practiced reading to baroque and other classical music). Utilizing careful transitions, the teacher than moves on to the "exposure." The exposure introduces the subject area more clearly, usually in the way of a multi-dimensional experience which is then further developed in the third phase, the "expansion." The final "re-creation" creates experiences which allow the student to express and use what has been learned, and subtly introduces the next lesson. Teaching moves like a symphony, with its major theme repeated numerous times, always in a slightly different context. In this way, material is presented repeatedly, in a variety of ways, leading to long-term memory storage and by-passing rote memorization or "forced" instruction. Additionally, the teacher uses all methodologies which aid in the experiential acquisition of the material (including a broad incorporation of the arts). This teaching model calls for the creation of complex "real-world" teaching environments carefully orchestrated by the teacher. What may appear to be a very spontaneous learning environment to any unschooled observer is, in fact, the result of very precise planning. Such planning focuses almost entirely on how the classroom can create "here and now" experiences for the student, not on expected outcomes. The expected outcomes are goals which guide the lesson from pre-exposure to re-creation, but which are not the focus of planning. This is important because threat of meeting specified outcomes is virtually eliminated, and learning is guided by what Barzakov calls "educative feedback." Both student and teacher look upon learning as an expansion of knowledge similar to Hart's acquisition of prosters, not the accomplishment of goals to be evaluated and rewarded.

Barriers to Desired Internal Processing

To summarize thus far, we suggest that specific teacher characteristics, various teaching methodologies and peripheral stimuli (external setting), all help to activate the internal states in the appropriate or desired direction. In each of these cases, the brain's natural function of comparing, patterning and categorizing is being optimally activated.

There are also, however, particular events and teacher behaviors which cause barriers to learning by creating internal states which are incompatible with the acquisition of new prosters. Both Lozanov and Barzakov identify events in the classroom which create internal processing that is incompatible and, in some cases, antagonistic to learning. According to Lozanov, these "barriers" to learning are alerted automatically, are self-protective, and relate to the external source of information or the information itself. These three barriers are the intuitive/affective barrier, the critical/logical barrier, and the ethical barrier.

The intuitive/affective barrier is aroused when the student experiences real or imagined threat in the classroom, such as fear of the teacher or mistrust. When this occurs, the student ceases to be involved in the learning process and reflexively focuses on himself or herself in order to defend against the threat. Sarason's research with anxious students (1982) describes the type of thinking these students engage in when threatened. Their thoughts move away from the task and focus on themselves with expressions of failure, such as "I can't do this," and "I'm dumb." Their less-anxious counterparts, on the other hand, can focus on the exam questions and invoke their problem-solving skills. In terms of brain theory, we may be seeing an example of "downshifting" of the brain in the high-anxious students. The higher brain functions of reasoning and problem solving are abandoned for concern with overpowering emotions characterized by the limbic system.

The critical/logical barrier refers to information presented which does not make logical sense or creates cognitive dissonance. Lozanov suggests that "when suggestion, i.e. learning, with a greater or smaller conscious ingredient falls within the field of the consciousness of critical thinking, it is weighed up carefully in all its aspects before being accepted," (1978). In terms of brain theory (Hart, 1978), the incoming information is critically evaluated by whatever information is stored within that particular brain. If incoming information is contrary to already established programs, the learner will respond with resistance. This resistance will take the form of internal thoughts focusing on conflicts or rejection of the new information. In any event, the student no longer participates in the lesson until the conflict is somehow resolved.

This barrier is not experienced until learners move into Piaget's formal operational thinking. Learners analyze information on the basis of hypothesis, "fit," and futuristic application. Events which were previously dealt with on the intuitive/affective level are now processed intellectually through reasoning and logic. If information presented does not meet already existing complex intellectual prosters of the individual student, such information must be challenged and may be aborted. Unless the student is provided with immediate access to further information through questioning or some other means, he or she will cease to listen or actively focus on events in the classroom. Instead, he or she will dwell on the conflict and think about ways in which he or she is right or wrong and possible measures to take to resolve the discrepancy. This is why the most productive learning involves meaningful feedback within a flexible and safe environment which includes an understanding of internal as well as external focusing. It is critical that the teacher address issues generated by the raising of the critical/logical barrier by being sensitive to pupil verbal and analog behavior.

Ethical barriers are aroused when information is contradictory to the principles and values of the individual and includes religious or cultural beliefs. Any external sensory input which violates the learner's values or personal beliefs will alert the ethical barrier.

From the above descriptions, it can be seen that the barriers mutually interact and quite often it is impossible to separate them. It is important to remember that barriers are natural, protective and quite spontaneous. It has already been mentioned that it is possible that this involves a very rapid downshifting of the brain. Teachers may avoid raising barriers unnecessarily but can never fully avoid doing so for all students. Additionally, barriers may be raised due to factors outside of the school and appear in the form of "unfinished business," such as arguments with parents or a friend. In each case, the teacher's ability to "harmonize" with the barriers (Hughes, 1983) becomes the most appropriate way to lower them and return the student to more desired external and internal focusing.

We would like to include physical factors as one additional distractor for both external and internal focusing. Although not a barrier considered by Lozanov or Barzakov, we suspect that room temperature, fatigue, ill health and hunger, as well as other environmental distractors, do much to prevent full focusing on learning. Phenomenologists (Combs, Richards & Richards, 1976) have identified many of the perceptual distractors (which can, of course, also be used as "attractors" and motivators if properly mastered and orchestrated) to desired focusing, and brain research is providing additional data.

In conclusion, we believe that internal processing can be orchestrated by providing for the most efficient system and method of "calling up" old programs and providing for the creation of new ones. This effect comes about through reduction of threat, presentation of multi-dimensional teaching strategies, and an understanding of barriers to learning. Internal processing is a critical part of the overall learning process and it is imperative that teacher education include strategies and methodologies which acknowledge internal processing as a major aspect of learning.

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L'Orchestration due Processus Interne

L'érudition comprend une concentration externe et une transformation interne du cerveau humain qui ce deplace entre ces fonctions dans un mouvement naturel. Avec plus de connaissances sur les fonctions du cerveau, et en intégrant le tous avec des systèmes et des méthodes qui ameleiore ce processus, l'érudition peut être accelérer. Cet ouvrage represente une intégration de ces deux concepts pour orchestrer la transformation interne naturelle qui est critique a l'érudition et a l'enseignement.

Die Orchestung und Innere Verfuhrung.

Lernen geschieht sowohl durch äussere Auswahl als auch durch innere Verarbeitung, und das menschliche Gehirn bewegt sich zwischen diesen Funktionen in einem natürlichen Vorgang. Durch ein besseres Verständnis der Arbeitsweise des Gehirns und durch eine Integration dieses Verständnisses mit Systemen und Methoden, die diese Arbeitsweise fördern, kann das Lernen beschleunigt werden. Dieser Artikel stellt eine Integration dieser zwei Konzepte vor, mit hilfe der Prozesse diese natürlichen inneren Prozesse, die so kritisch fürs Lernen und Lehren sind, besser orchestriert werden können.

Orquestación del Procesamiento Interno.

El aprendizaje comprende tanto un enfoque externo como un procesamiento interno, y el cerebro humano alterna entre estas dos funciones en un movimiento natural. Por medio de una mejor comprensión del funcionamiento del cerebro y la integración de este conocimiento con sistemas y métodos que realzan este proceso, el aprendizaje se puede acelerar. Este trabajo presenta la integración de estos dos conceptos para mejor orquestar estos procesos internos naturales que son tan críticos en el aprendizaje y la enseñanza.

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Suggestive Accelerative Learning and Teaching (SALT) With Learning Disabled and Other Special Needs Students: A Literature Review and Meta-analysis*

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Abstract. All books and articles for the years 1976-1984 which dealt with experimental/control group results or program progress results from use of Suggestive Accelerative Learning and Teaching (SALT) techniques with students requiring special services were examined. Forty-five data sources were reviewed for analysis of population, study design, findings, and conclusions. These studies dealt with special students in the categories of learning disabilities, educable mental retardation, remedial reading, behavioral/emotional disturbance, low socio-economic status, remedial mathematics (including math phobia), low/poor/under-achievers, normal, and gifted and talented. Analysis of statistically significant findings indicated SALT is a promising procedure for special needs populations. Suggestions for improvement of future studies are given.

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Markedly accelerated rates of learning in comparison to regular teaching procedures have been reported during the past decade for procedures variously known as Suggestive-Accelerative Learning and Teaching (SALT) (Schuster, Benitez-Bordon & Gritton, 1976; Caskey, 1980), Suggestopedia or Lozanov technique (Bancroft, 1976; Lozanov, 1978), SuperLearning (Ostrander & Schroeder, 1979), and Caycedo's Sophrology (Bancroft, 1979; Ostrander & Schroeder, 1979). These accelerated procedures have received the most notice in regard to results with foreign language instruction (Bancroft, 1976), but substantial research has also been conducted on various types of special needs students. The purpose of this article is to review the extensive research and reporting base of applications of SALT to special needs students in a systematic way which allows for some objective conclusion regarding the value of SALT procedures with special help students.

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These accelerated learning and teaching procedures have been thoroughly described by Schuster et al (1976), Caskey (1980) and Lozanov (1978) as a carefully prepared physical and affective environment. Students are prepared by the teacher for the learning/teaching session by circumventing previously learned barriers to learning and by using positive verbal suggestions, physical relaxation, mind calming, and prior pleasant learning memories. The teacher presents an active lesson with clear objectives and a great deal of content. This presentation is vivid and may contain elements which facilitate retention through the teacher's dynamic vocal intonation, vivid visual images, association cues, and student sensory experiences. The active presentation is followed by a passive review in which students re-experience the lesson while in a controlled breathing relaxation state with slow baroque music in the background. The teacher reviews the lesson visually or with oral intonation while the students' eyes are closed. The breathing is synchronized with the music which is in duple meter. A third session on the lesson deals with dramatic representations of the lesson content by the students, and practice to fluency satisfaction which is followed by a self-correcting quiz. Many subtle elements are incorporated into the presentations which either reduce the effects of prior conditioned barriers to learning or which enhance the receptivity and retention of the students. A revision of the earlier SALT procedures manual sets forth current procedures which incorporate research findings into the classroom practices (Schuster & Gritton, 1985).

Results have been reported in a wide variety of publications throughout the world wherever the procedures have been used. The applications in the US have been monitored through a three-year project at Iowa State University (1975-1978) funded by the Iowa Dept. of Public Instruction (Schuster, 1978). *The Journal for the Society of Accelerative Learning and Teaching* is the major English-language medium for publication of scientific, scholarly, and practitioner-related reports and articles which deal exclusively with these procedures. A number of dissertations and books have been produced by recognized scholars and these, along with other aspects of the data-base of articles, ERIC documents, and secondary sources are indexed, reviewed, abstracted, and available for reference searches through the National Institute of Education's Educational Reference Center (ERIC). Results have indicated rates of learning varying from two to ten times the rate expected with traditional instruction (Ostrander & Schroeder, 1979). While these reports are cause for great interest among those who are concerned with the improvement of learning and teaching, the prime test of any educational procedure lies in the effectiveness of the method in handling the needs of problem learners. If learning rates with special needs students were to be increased to that of only traditionally-instructed students by means of these accelerated methods, the result would be of significant value to that 20-30% of the school population in need of special help. The purpose of this study is to review the evidence of effectiveness of these procedures with special needs students and particularly students with learning disabilities, since LD comprises the largest proportion of special education services. Special instruction in various subjects, including reading and mathematics, spelling, retention, and general classwork are considered within the province of learning disabilities, even though the low-functioning students may not have been formally classified as LD handicapped. Articles which deal with remediation in any area may apply to LD and are so considered for LD review within the context of this study.

Procedure

All issues of the Journal of the Society for Accelerative Learning and Teaching and all available books were examined for inclusion of research data or secondary reports of SALT procedure results with elementary and special needs students. Since publication of the SALT Journal lags by several volumes, the current and latest articles in that source are dated 1982. This review included Search #84-824 (April, 1984) by ERIC on the topics "Lozanov" and "Suggestopedia." Bibliographies from articles were examined for references to other publications. Each article was reviewed for presence of data relating to population description, study design, results, and conclusions. These extracted data were organized into tables for further analysis and summary by grade level and special needs/normal and gifted categories.

The criterion for statistical significance was set in advance at .05 for inclusion of results in the tables. Findings above the .05 levels are reported as "nsd" (no significant difference) for large samples. In small samples, however, a value larger than .05 may be a preliminary indication of a real difference that was hypothesized. The one-tailed alternative is accepted as the statistical level throughout, that is, any differences are assumed to favor the SALT procedures unless specified otherwise. Studies are also grouped according to program progress results and experimental control study results in additional summaries for further discussion. A simple meta-analysis of the experimental findings is accomplished by testing the proportion of significant findings against a hypothesized .05 proportion of statistically significant findings due entirely to chance. This test of the actual number of significant findings is accomplished by the use of the Cumulative Binomial Probability Distribution (CBPD) with n=total number of comparisons, r=number of significant findings favoring SALT procedures, and P=proportion of statistically significant findings hypothesized to occur randomly (.05) when no real differences are present. The level of statistical significance for differences in the meta-analysis is set at p=.05.

Findings

Normal and Gifted/Talented Reports

The ten studies published 1976-1982 are shown in Table 1. Two reports deal with grades 7 and 8, two with high school students, and seven deal with populations in grades 1-6. The populations include normal classes, language arts classes, good and poor spellers, upper and lower level readers, and gifted classes. Three studies dealt with good/upper ability and gifted students, while seven measured normal/mixed/poor achievers.

Study designs researched the effects of SALT on recall of words and digits (4 studies), vocabulary development (1 study), mathematics (3 studies), creative thinking (1 study), reading and writing (1 study), general achievement (1 study), and physical growth and health (1).

Statistical tests were used in five studies (Balevski & Ganovski, 1975; Boyle & Render, 1982; Held, 1976; Johnson, 1982; Lozanov & Balevski, 1975) revealing twelve differences significant at levels .05 and .01 for increases in creative thinking, recall of individual words, general achievement, weight gain, and school attendance. Other reported findings were expressed in terms of progress rather than statistical tests and these findings indicated acceleration of learning from 25-200% for school subjects, and 3-28% for digit recall.

Conclusions favored validity of SALT procedures in most grades, subjects, and ability levels. Best results were demonstrated for better students, although low functioning students improved significantly with SALT procedures.

Elementary Special Needs Reports

Seventeen references for the years 1976-1982 were found for students in grades 1-6 as shown in Table 2. Six of these studies involved data on students in grades 7-9 and will be included in the secondary review section also. Some of these sources dealt with more than one type of special needs category, with the result that some studies apply to more than one category as follows: Learning Disabilities (4), EMR (6), Low Socio-economic Status (SES)(2), and remedial reading, problem/low or poor function underachiever, etc. (11).

Academic areas included remedial reading (10), mathematics (1), spelling (2), vocabulary recall (1), creativity (1), attitudes of students toward the music used in the instruction (1), and listening comprehension (1). Elapsed time of studies ranged from two days to two years.

Only seven studies conducted statistical tests of the data (Edwards, 1978; Hales, 1983; Johnson, 1982; Lee, 1981; Nelson, 1979; Shultz, 1978; Schuster & Prichard, 1978b). Results consistently favored SALT procedures as effective in areas of creativity, spelling, reading of words, and learning of multiplication tables. The studies on mentally retarded populations with reading and listening comprehension by Hales and Lee found no statistical differences in the use of SALT procedures over control groups.

Progress reports are detailed in the following summary:

Summary of Pre/Post-Test Findings

Jampolsky & Haight, 1975
    Reading speed and accuracy doubled in one day; radical positive behavior change.
Prichard & Taylor, 1976a
    Reading rate doubled and quadrupled.
Prichard & Taylor, 1978a
    9-21 mos. progress in spring semester.
Prichard & Taylor, 1978b
    Reading rate 2-4 times previous year.
Prichard & Taylor, 1980c
    10-45 months' progress in one year.
Prichard & Taylor, 1981
    Handicapped overtook non-handicapped.
Held, 1978
    Passive mastery; active total failure.
Held, 1984
    1-year progress to 2nd reader in 3 months.
Edwards, 1978
    Statistically significant creativity changes in 5/11 variables.
Schuster & Prichard, 1978
    Spelling changes over 2 years in grades 1,3,5,6 (differences at $p=.01$).

Other studies reported program progress in individual tutoring and small group reading instruction. Results indicate acceleration of special needs learners ranging from two to four times the rate of normal students.

Secondary Special Needs Reports

Thirteen studies were found for the years 1976-1982 dealing with grades 7-12 as shown in Table 3. Distributions of studies by student type were: Learning Disabled (2), Low SES (5), emotional block (1), and other, including behavior and alternative school (5).

Academic areas measured were: art and creativity (2), affect/attitude/behavior (5), spelling (3), general achievement (2), reading (3), life science (1), agribusiness (2), Spanish (1), science (1), history (1), and mathematics, including math phobia (4). Elapsed time of SALT procedures varied from one hour to two years.

Six of the studies reported statistical tests of the achievement differences (Edwards, 1978; Galyean, 1980; Prichard, Schuster & Walters, 1979; Schuster & Ginn, 1978; Schuster & Prichard, 1978; and Schuster & Vincent, 1980). Results showed statistically significant differences in 33 of 62 variables tested. Substantial progress for SALT lessons was found in the areas of creativity, Spanish, agribusiness, affective relations, general achievement, arithmetic, and reading. Second-year results tended to be better than first-year results in long-term studies, indicating that a trained experienced teacher was an advantage to the students.

Summary of Pre/Posttest Results

Edwards, 1978
    5/11 creativity variables significantly high.
Gritton, 1976
    Mastery increases: 30-100%, 0-80%, 20-60%, 0-90%.
Held, 1978
    Presentations: Passive mastery; active failure.
Kline, 1976
    1-year program: Language up 3 standard deviations; Achievement up 25%.
Schuster & Vincent, 1980
    1-year program: Keymath up 1.4, Reading up 2.2, Freer affect (p=.05).

Other reports of program progress indicated dramatic increases in learning and reductions in negative adolescent behaviors. Achievement acceleration varied from 25-250% with secondary special-needs students, with the better students again showing the greatest gains.

Post-Secondary Special-Needs Reports

Only five sources were found relating to post-secondary results, all from the years 1975-76 as shown in Table 4. Academic subjects were mathematics and math phobia (1), military remedial English and remedial reading (2), and reading and study skills (1), foreign language to overcome fear of failure (1). Four of the studies used control groups. Duration of the classes ranged from five weeks to twenty-two months.

All of these post-secondary studies conducted statistical tests of student progress in comparison to control groups. A military remedial English study showed a significant achievement difference for the SALT group. A mathophobic college class study showed movement from significant to non-significant differences between the groups which favored the SALT lessons, and in another study, the fear of failure and exams was favorably influenced. In two cases, the differences were not statistically significant (college reading and study skills: Caskey, 1976; military remedial reading: James, 1976) although the trend of differences favored the SALT procedures. These studies revealed factors which other studies have since confirmed: better students profit most from acceleration procedures, adequate teacher preparation is required, the importance of equivalence of subjects in control and experimental groups, and the acceleration of learning up to 250% in some cases.

Evidence for SALT Effectiveness With Special Needs Students

Since educational institutions typically do not keep data regarding rates of progress for special needs students, no norms for expectations from interventions are available. Individual teachers or administrators must examine effectiveness of current practice and compare those isolated findings to published or otherwise available program or experimental results. Since most institutions do not summarize the program progress on an annual basis, and since program progress reports are scant, program improvement may be a low priority, or perhaps an attitude of hopelessness exists in regard to the prognosis of special needs. Comparison of the effectiveness of current and available practice therefore, has been rare traditionally in both education and special education until the current push toward excellence and accountability. Summaries of experimental research on a narrow topic such as SALT techniques are particularly noteworthy, therefore, since they comprise a select body of information available for program decisions by teachers and administrators and future projects by researchers.

Meta-Analysis

The following Summary of Experimental Studies lists the fifteen control-group experimental studies extant on SALT-related results with special needs students. These studies number seven, four, and four reports at elementary, secondary, and post-secondary levels respectively and comprise the basis for a meta-analysis which can provide an overall statistical analysis and general conclusion on the value of the SALT research base.

Summaries of Experimental Studies (with control group)

Elementary Special Needs

Nelson, 1979
Reading: Daily tests, p=.05; final exam, p=.01

Schultz, 1978
Math: Decreased learning time, p=.01; gain, p=.2

Hales, 1983
Reading: nsd SALT with MR students.

Held, 1976
Reading: Most progress from better readers, p=.01, Breath control is important.

Lee, 1981
Listening Comp: nsd SALT with MR students.

Prichard & Taylor, 1978
Reading: remedial LD & EMR overtook normals, but teachers often overlook the new skills.

Schuster & Prichard, 1978
Spelling: significant gains in 4/5 SALT teachers in comparison to controls.

Secondary Special Needs

Prichard, et al., 1979
Agricultural Business achievement improved, p=.01; Nsd for affect.

Schuster & Ginn, 1978
General achievement improved, p=.05; affect improved, p=.05.

Schuster & Prichard, 1978
Art, Life Science, Earth Science, Math/Reading Exp. p=.05 in 9/28 variables; control, 2/28.

Galyean, 1980
Behaviors: 11/12 negatives declined, p=.01; 2/4 positives improved, p=.01, p=.001. Difference between groups, p=.001.

Post-Secondary Special Needs

Kolarova, et al., 1975
Stabilization of school neuroses with SALT as well or better than drug therapy.

Capehart, 1976
Statistics: pretest differences of p=.01, exp/control changed to nsd (SALT improved).

Caskey, 1976
Remedial English: Learning twice normal rate (pre/post, p=.05); +.65 year progress in 3 mos. (+.24 for control).

Caskey, 1976
College reading and study skills: invalid because of poorly prepared teacher, Nsd.

Summarizing results on the 64 variables and comparisons made in these studies reveals that subjects using SALT procedures showed statistically significant higher performance in 37 instances. A non-significant proportion of multiple studies can be hypothesized to show statistically significant results. A proportion of .05 of multiple findings can be expected to show these results due entirely to chance, which in this study is the equivalent of 3.05 findings. The present proportion of 37 significant findings in 64 comparisons can be tested for significance of difference from a null hypothesis of no significant difference by the use of the Cumulative Binomial Probability Distribution (1955). Critical values for significant deviation from the occurrence of significant findings due to chance alone can be established from the CBPD for n=64, p=.05 as: r=7 yields p=.0403 (or below p=.05), r=9 yields p=.00444 (or below p=.01), and r=14 yields p=.00000. The proportion of 37/64 produces a probability p=.00000, a highly statistically significant effect in favor of SALT procedures. The probability that the differences between the SALT experimental and control groups are due to chance is less than 1/10,000. Of even more importance however, is the practical significance of increasing achievement consistently in populations which have demonstrated inability to learn efficiently using current classroom practices. These studies demonstrate that some extraordinary effects are present in SALT which cannot be accounted for by chance and which have practical significance for the most nettling of all educational problems, students with special needs.

Subject Areas Researched with SALT

Various categorizations of the studies can be applied in order to cluster information in meaningful ways. Clustering the findings by handicapping category is possible, for example, or by grade clusters or classification as an experimental study or program progress report as has been done earlier. A listing of the numbers of studies by subject areas is also helpful, in order to examine the distribution of topics and plan future research. The academic subjects researched in these studies and number of studies devoted to each are:

Reading and Remedial Reading	15
Mathematics	8
Spelling	6
Secondary academic subjects	6
Affect/behavior	6
Arts and Creativity	4
Auditory recall/vocabulary	4
Writing	2
General Achievement	2
Remedial English	2

Reading and mathematics have provided most of the attention in these studies perhaps because these are obvious needs and also because of the ready availability of tests for measurement. The distribution is encouraging in its breadth, but a need for many more studies in a broader range of academic areas exists and researchers and program reporters should note and respond to this need. Writing, in particular, is an area in need of serious attention in special needs students, and few measures are available for monitoring. Perhaps some objective measures of the students' daily work could be reported.

Populations Researched in SALT

The categories of special needs students researched by these reports and the numbers of related articles in the literature are as follows: Learning Disabilities (6), Mental Retardation (6), Low SES (7), Remedial/low/poor/underachievement (15), Behavior Problems (5), and Emotional Problems, including phobias (4). Since some of the articles are counted more than once, the number of references will not equal the number of reports.

Critique and Recommendations

A number of problems were encountered during this review which need to be addressed in regard to the quality of the reporting. While these studies contain valuable data, important documentation is often lacking. A number of sections must be included in any research report, including a thorough description of the population(s) used, full description of the procedures and time of the treatment, full citation of the tests used, report of the amount of progress, and some statistical test of the differences observed. As the reader can observe from the summary tables in this review, these types of data are distinctly non-uniform and sometimes lacking entirely, with the result that the study is weakened. The purpose of a study is to share information, so full details are necessary if the report is to have utility. Many competent researchers are available to help persons organize results reports or design control studies. Also, if achievement progress is being presented, such as in reading, a reading achievement test rather than a diagnostic test is preferred. The analysis of groups of studies such as that conducted in this review requires that certain standard information be presented in the data base. Researchers, practitioners, and editors have the responsibility to see that basic information is contained in this important documentation.

These weaknesses notwithstanding, the SALT studies dealing with special needs students demonstrate learning and teaching effectiveness of both statistical and practical significance which demands broader implementation and continual study and reporting. The research has verified repeatedly however, that the quality of learning is directly related to adequate teacher preparation in these techniques.

Reports of failures of the SALT procedures are as important as the successes, and these articles should be studied thoroughly in order to determine possible weaknesses in procedures or research design. The two dissertations dealing with failures of SALT with MR populations are noteworthy. Do SALT procedures require special modifications with certain special populations? Or is the lack of success due to inadequate teacher preparation and experience? Reviews of research are required in order to interpret the importance of the findings and also the applications.

Literature on Procedures with Special Needs Students

Many excellent sources dealing specifically with SALT techniques emerged from the literature during the search phase which are listed here as "SALT Special-Needs Students Procedures." These sources provide excellent background for further reading on the individual elements of SALT procedures. This list is not intended to be exhaustive, but merely to be helpful in either developing orientation information or expanding on SALT teacher training. An argument could be made to support the point that the research articles document the efficacy of these procedures, but these procedural articles constitute the practical applications of our analysis. So, in this, the conclusion of the research review, the reader is left with this list as a practical beginning.

SALT Special-Needs Students Procedures

Source	Content
Barber (1979)	"Methods and Word-by-Word" Self-Suggestion
Bancroft (1982)	Comparison of Suggestopedia and Tomatis methods
Brownlee (1981)	SALT with Learning Disabilities, review of seven studies based on author's master's thesis
Brownlee (1982)	Introductory overview of SALT techniques; seven sources of suggestion reviewed
Bullock & Sevete (1981	Rhetorical review of guided imagery
Cordoni (1981)	Imbedded words and letters in pictures for revisualization and association
Gritton (1976)	General secondary classroom procedures.
Held (1985, 1979)	General procedures with learning problem students

Jampolsky & Haight (1975)	Procedures for imagery, suggestion, relaxation
Landahl (1982)	Mathematics lesson example
Martin (1983)	Spelling instruction with music with teenage boys, male subject no longer stuttered
Pollack (1976)	General discussion of Bulgarian school procedures, special-needs students reference: "Extra individual attention at the first indication of his lagging behind"
Prall (1980)	Alternative education: philosophy, procedures, and techniques integrated with SALT
Prichard (1976)	SALT remedial reading techniques
Prichard (1979, 1980)	Verbal teacher suggestion techniques
Racle (1979)	Establishing mood for literacy learning
Schuster (1980)	Review of 4 studies containing data and discussion of implications ("Jack and Jill went up the hill...academically.")
Schuster (1979)	Excellent brief checklist of classroom procedures (single page)
Schuster & Gritton (1985)	Standard Accelerated Teaching procedures with full revisions to incorporate research
Taylor (1978)	Remedial reading SALT procedures for an 18-week program

Tables 1 through 4

Table 1

Gifted and Normal Elementary School Students

Source	Population	Study Design
Balevski & Ganovski (1975)	50 males and 50 females ages 11-17 in regular classes in experimental gp	Stratified exp/control study of recall of 15 adjectives with one-week follow-up
Beer (1978)	Two normal grade 1 classes in Vienna, Austria public schools (n=64)	One-year anecdotal program results in reading, writing, and mathematics
Beer (1979)	Normal classes in Vienna, Austria public schools, grades 1-5 (n=?)	Anecdotal program results for four years in mathematics
Boyle & Bender (1982)	Three randomly assigned Grade 7 Language Arts classes (n=56).	Post-test effects of fantasy journeys on Torrance Test of Creative Thinking with one and 5 journeys (Exp Gps 1 & 2) compared to control Gp
Fisher (1982)	Normal mixed academic ability students, ages 10-13 (11 males, 6 females), in a combined 5-6 room.	Pre-/Post-test progress for six-week period on retention of digits in spans of six to 11 digits, scores for each grade were averaged separately
Haines (1982)	Two groups of gifted fourth-graders (13 males; 6 females)	A descriptive case study for 1 hour of SALT mathematics instruction for a period of 1 semester, measured on chapter tests local criterion referenced test, and SAT in mathematics
Held (1976)	Upper and lower level 5th and 6th grade readers (n=64).	Random exp/control with three reading groups (upper, lower, no treatment) and 3 treatments mind calming, pleasant recall, and combination) in active and passive lessons on 12 randomly assigned rare English words in 2 learning sessions
Johnson (1982)	Good and poor spellers in grades 2 and 6 (n=40)	Random preformed classes for quasi-experimental SALT experimental/control groups of 10 each, averages of pre-/post-test changes for learning 20 words were tested by analysis of covariance
Lozanov & Balevski (1975)	Normal urban and rural classes in grades 1-2	Experimental/control group comparisons in achievement rate, gain in height and weight, and absenteeism
Rhodes (1982)	One high school junior, no background or ability information given.	Progress report on one-to-one tutoring over 6 sessions using SALT techniques with 245 non-ordinary words for vocabulary preparation on the Scholastic Aptitude Test (SAT)

Findings	Conclusions and Comments
Statistically significant improvement of 5/11 of the creativity variables:	Verbal flexibility Figural fluency Flexibility Elaboration No. of creative strengths
Two-way ANOVA showed nsd between suggestopedic and traditional methods of teaching word ID.	Review taken from abstract which contains no mention of training background of the teacher. Special adaptations for MR populations may be necessary.
Better readers and older students make better gains. Breathing control is better than combination.	See this review in normals section
Student progressed from non-reading to books, initiative, and writing in 5 months. Case 2 went from non-reader level to fluent 2nd grade (Scott, Foresman) in 3 months.	No data given; excellent narrative of progression of the cases; interesting reading.
Speed and accuracy doubled in one day; noticeable positive affective change.	Radical behavior change and rate of learning change.
Significantly better (p=.01) spelling with relaxation training; poor spellers consistently higher with relaxation controls (p=.05; 64% mastery vs 21% for controls)	Definite increase in spelling ability for normal and poor spellers in grades 2 and 6. Poor spellers performed less well than good spellers even with relaxation over the two-week period of the study.
No significant differences occurred for groups using combined or uncombined procedures in listening comprehension instruction.	"Neither the combined nor the uncombined strategy training was superior to the other in affecting listening comprehension (l.c) or retention of l.c." in el. MR pops.
Daily learning differences on flashcard tests (p=.05); final test differences (p=.01); 20% difference in learning retention of groups.	A promising procedure for students with problems in behavior and in learning.
Grades 2 and 6 significantly better(p=.01) learning with relaxation sessions. Differences existed between good and poor spellers in progress (p=.05), although poor spellers were consistently better with relaxation (p=.05).	Relaxation training has a definite effect on the ability to learn spelling words in grades 2 and 6.
Rate of achievement was three times normal. Extra curriculum added to fill time. Absenteeism in exp. gp half that of controls and better weight.	Markedly accelerated learning rate and better health for exp. students. Added languages, proofreading, and physical fitness activities to fill the time. Third grade curriculum completed by end of grade 2.
Retention of 81% on 84 randomly selected words from the list of 1245, student scored at the mean on the SAT.	No background information given on the student leaves conclusion open. Retention of words was good.

Table 2

LD and Remedial Students (Elementary)

Source	Population	Study Design
Edwards (1978)	Low and middle socio-economic status 5th and 8th graders (n=175)	Progress report of SALT training effects on creativity over 6-7 months
Hales (1983)	56 mild/moderate mentally retarded ages 9-16 in school classes.	Experimental/control study of effects of suggestopedia on word identification skill in reading in comparison to traditional teaching
Held (1976)	Upper (n=32) and lower level (n=32) readers in grades 5 and 6	Random exp/control study on vocabulary recognition of 12 randomly assigned rare English words in 2 learning sessions; high, low, and no treatment groups with three treatments (mind calming, pleasant recall, combination)
Held (1984, 1979)	One 3rd grade LD non-reading male; one neurologically-handicapped male repeating Grade 1 with normal IQ & poor memory	Two reading case studies: (1) 25 lessons in 5 months; (2) 3-month program and informal assessment
Jampolsky & Haight (1975)	Single case, male, no age given, laborious reader with good auditory skills and poor effort in learning center	Single case study with pre/post evaluations of effects of two 30-minute reading sessions and home practice on consecutive days
Johnson (1982)	Poor and good spellers in grades 2 and 6 (n=40)	Random preformed classes for quasi-experimental SALT experimental/control groups of 10 each, averages of pre-/post-test changes for learning 20 words were tested by Analysis of Covariance.
Lee (1981)	Four groups of el. mentally retarded students	Four-way experimental/control group study to test individual and combined effects of SALT and Total Physical Response on two tests of listening comprehension
Nelson (1979)	Six univ. clinic students w/problems in behavior, reading, math & attn to task; ages 6-8	Randomly assigned exp/control groups for reading new words in four 40-minute sessions in two weeks

Findings	Conclusions and Comments
Statistically significant improvement of 5/11 of the creativity variables:	Verbal flexibility Figural fluency Flexibility Elaboration No. of creative strengths
Two-way ANOVA showed nsd between suggestopedic and traditional methods of teaching word ID.	Review taken from abstract which contains no mention of training background of the teacher. Special adaptations for MR populations may be necessary.
Better readers and older students make better gains. Breathing control is better than combination!?!	See this review in normals section.
Student progressed from non-reading to books, initiative, and writing in 5 months. Case 2 went from non-reader level to fluent 2nd grade (Scott, Foresman) in 3 months.	No data given. Excellent narrative of progression of the cases. Interesting reading.
Speed and accuracy doubled in one day. Noticeable positive affective change.	Radical behavior change and rate of learning change.
Significantly better (p=.01) spelling with relaxation training. Poor spellers consistently higher with relaxation controls (p=.05; 64% mastery vs 21% for controls).	Definite increase in spelling ability for normal and poor spellers in grades 2 and 6. Poor spellers performed less well than good spellers even with relaxation over the two-week period of the study.
No significant differences occurred for groups using combined or uncombined procedures in listening comprehension instruction.	"Neither the combined nor the uncombined strategy training was superior to the other in affecting listening comprehension (l.c) or retention of l.c." in el. MR pops.
Daily learning differences on flashcard tests (p=.05); final test differences (p=.01); 20% difference in learning retention of groups.	A promising procedure for students with problems in behavior and in learning.

Table 2, Cont'd.

LD and Remedial Students (Elementary)

Source	Population	Study Design
Prichard & Taylor (1976a)	Remedial reading students, grades 3-7, including 3 LD and 2 EMR, (n=20)/	Program progress for 14 weeks in 6 classes, 4 students per class of remedial reading; Spache Oral and Silent Reading Test and Spache Diagnostic Reading Test
Prichard & Taylor (1978a)	Twenty remedial reading students incl. 5 LD and 3EMR, grades 3-7	Progress report for one semester of 16 weeks in SALT remedial reading; Spache Diagnostic Reading Test
Prichard & Taylor (1978b)	Forty elementary students (23 EMR or more than one year below grade level; 17 non-EMR with one-year deficit)	Remedial reading program progress of 14-week SALT lessons in 2 45-minute sessions per week in the Barnell Loft series
Prichard & Taylor (1980a)	Special needs students	Program progress for remedial reading over a sixteen-week period of 2 sessions per week with an experienced SALT teacher
Prichard & Taylor (1980b)	Forty EMR and slow learners (IQ >70; grades 2-7.	Program progress for SALT program taught on alternate days; Stanford Diagnostic Reading Test
Prichard & Taylor (1981)	Eighteen grade 3-7 LD students with one-year lag in reading, discr. ability/achiev. and process deficit	Program progress for 16 weeks of two 2-day cycles per week in remedial reading
Rhodes (1982)	Remedial reading students from Taylor & Prichard, 1976a (n=14).	Pre/post questionnaire to test students' attitudes toward three musical compositions used in repeated hearings during remedial reading
Schultz (1978)	Four matched gr. 4 underachievers in mathematics.	Matched exp/control study on multiplication tables taught with SALT for 30-40 minutes daily
Schuster & Prichard (1978b)	Eleven low socio-economic classes at grades 3, 5, 6, and 9	Progress results of a two-year project including spelling

Findings	Conclusions and Comments
Gain of 80% in 16/20 students over 14 weeks; Wd Recog mean: .85 SD .6 Oral Rd mean: 1.365 SD .68 Silent Rd mean: 1/36 SD .64 Excellent relaxers averaged 1.01, 1.83 and 1.55 on the three subtests.	Learning Rate two to four times standardization sample of test. Some children not ready to learn to relax. Relaxation response is a major factor.
Handicapped students caught up with non-handicapped in the remedial reading class.	Teachers' attitude and expectancy must change in regard to students' ability to learn.
Average gain for 14 weeks Wd Recogn: 9.41; Oral: 16.65; Silent: 18.82 mos. 9/17 > 1 yr Wd Rec. gain, 14/17 > 1 yr Oral gain, 14/17 > 1 yr Silent gain.	Rate of learning 2 to 4 times greater than class of previous year which had good results (WR 6, Oral 8.47, Silent 9.2) of better than one month progress per month of program.
Average progress for the semester ranged from 8.5 to 22 mos. on the Spache Diagnostic Reading Test subtests.	Rate of learning with special needs students increased from two to four times that of norm group on the test.
Av. gains for grades 2,3,5, 6, 7 in nos.: 10.64, 14.09, 19.5, 45.13. 12.67. IQ effects shown; 70-78 IQ students never independent.	Some students achieve good test results but are unable to survive independently and are never free of reading problems.
Wd recogn: 7>1 yr prugress Silent Rd: 16>1 yr progress Oral Rd: 15>1 yr progress Nsd between non-handicapped remedial, LD & other types of handicaps over 2-yr period.	Silent progress av 16.5 mos. Ld learned just as well as non-handicapped. "Substantial gain" reported.
Questionnaire on pretest showed that students enjoyed the novelty of the music posttest results showed that the students still liked the music, although their reactions were more neutral.	Students do not tire of repeated hearing of the same music. Students may feel more relaxed and less aroused by repeated hearings.
Decreased learning time (p=.01) favored exp. gp (no decrease shown for favored exp. gp (p=.19). SALT pre av. 11 probs in 180 sec.; SALT post av. 20 problems in 90 seconds.	Small group study requires extremely large differences for statistical significance. significance level is affected by sample size.
Statistically significant improvement in spelling at grades 1, 3, 5 & 6.	Although this study measures a number of classes, subjects, and grade levels, spelling is the consistent measure.

Table 3

LD and Remedial Students (Secondary)

Source	Population	Study Design
Edwards (1978)	Low and middle socio-ec status 5th and 8th graders (n=175)	SALT effects on creativity over 6-7 months
Calyean (1980)	Two low-achieving inner city gr. 9 and 10 Spanish classes reading in lowest quartile (n=64)	Matched gp exp/control study for positive and negative classroom behaviors; SALT for 5-7 min daily at beginning of class for 4 mos
Gritton (1976)	Two 8th-grade LD students.	Anecdotal and data results of 4 sessions over 4 days of SALT instruction on 200 spelling demons and fractions in a home environment
Held (1978)	One seventh-grade male remedial reading case (age 13)	Spell-down activity with comparison of effectiveness in remembering 30 spelling words in active and passive presentations
Kline (1976)	Alternative H.S. students unsuccessful in traditional program, learning problems and irregular attendance (n=22)	First year program results from relaxation and Lozanov lessons for foreign languages and TIME/LIFE history lessons. Achievement and CAT data
Martin (1983)	Junior high school boys; single case	Anecdotal report of the use of music in the teaching of spelling over three weeks
Phillips (1982)	3-12 adolescents ages 13-19 in social service agency emergency shelter <45 days	Description of group positive structuring of personal and social issues using SALT relaxation and visualization to lead positive change
Prichard, Schuster, & Walters (1979)	Low SES 9th graders (n=47)	Matched exp/control groups in Agribusiness class with five 80-minute sessions every 2 weeks for 14 weeks: Brooks Student Questionnaire, Levenson Locus of Control
Schuster & Ginn (1978)	Low SES 9th graders: SALT exp (n=51) control (n=13)	Exp/control study of one year achievement and affect results with a well-trained SALT teacher
Schuster & Prichard (1978)	Low SES classes.	Two-year program results in 7th gr Art and Life Science, and 9th grade Earth Science, Ag. Business, and Math/Reading

Findings	Conclusions and Comments
Statistically significant improvement in 5/11 areas: No of creative strengths; SALT affected all variables.	Verbal flexibility Figural fluency Flexibility Elaboration
Eleven of 12 negative behaviors declined in SALT group (p=.01); 2 of 4 positive behaviors increased (p=.01, .001)	Exp/control differences (p=.001) in attentiveness, involvement in lesson, supportiveness among students (cohesiveness), supportive responses to teacher, more smiling and addressing by name
Spelling mastery levels increased from 30 to 100% and 20 to 60%; fractions mastery increased from 0 to 80 and 90% levels in four days	Good narrative descriptions of reactions showing disintegration of barriers to learning mathematics
Total failure of 0/30 at active level; almost total recall of 29/30 at passive level	Passive level is essential, especially with students who have a history of problems
After first year: 2 dropped out, 4 to other schools, 2 apprentice teachers, 12 to regular program, 2 to college	From 4 A's & 14 F's to 14 A's and 4 F's, average of 1.25 years progress in achievement
California Ach. Test: Language Usage *14 SD Mechanics 5 SD Spelling up to -.5 SD Read Vocab * 5 SD Compreh. up to-1.5 SD Total Lang up * 3 SD	English not taught but CAT results show .6 year average
Good group progress; one boy went from F to C in spelling and one boy lost a stutter	A promising procedure
Startling drop in antisocial activities; greater concern and understanding; conflicts requiring staff intervention disappeared; more confidence	The process holds great promise; noticeable dedication to self-improvement, empathy, and cooperation
Exp. gp superior (p=.01) Nsd between gps on affective relations, better students on pretest did best	Experienced SALT teacher provided 2.5 ratio of acceleration of presentation
SALT superior in ach. measures (p=.05) and affective areas (p=.05).	Affective differences for SALT showed student/teacher affective relations, school stress, and learning orientation better
Significantly better for SALT presentations in 9/28 variables (p=.05). SALT showed gains in 12/28 comparisons; controls better in only 2/28	Trends favored SALT over controls. Second year results were better than first year.

Table 3, Cont'd.

LD and Remedial Students (Secondary)

Source	Population	Study Design
Schuster & Vincent (1980)	Nine LD 9th graders.	One-year results of the second year of SALT gains in mathematics, reading, and affective measures.
Stanton (1982)	One female 4th-year high school student with a mathematics block. Seventeen HS and university students	Case study of results of one 40-minute session of relaxation, vicarious positive suggestion through stories, imagery and self-image, but no remedial instruction; session of NLP immediately followed end of second term.

Table 4

LD and Remedial Students (Post-Secondary)

Source	Population	Study Design
Kolarova, et al. (1975)	12 univ. students with fear of exams and failure.	Therapy gps of 8-12 students in a foreign language course for 22 days, 4 hrs per day, using suggestology.
Capehart (1976)	Mathophobic college students ages 24-50 (av. 34.6 yrs). (Exp n=10, control n=17).	Exp/control groups of classs without random assignment on results of 5-week college statistics course.
Caskey (1976)	Two classes of Air Force HS level remedial English at a junior college.	Exp/control groups of classes without random assignment in remedial English 3 days per week for three months.
Caskey (1976)	College students in reading and study skills clinic of univ. counseling center.	Exp/control groups compared results after 12 sessions in study habits, reading skills, and personal organization.
James (1976)	Air Force remedial reading students; college reading course; no numbers of students given. Some ESL.	Anecdotal results of grammar course for Air Force personnel; college reading course for English as primary language and English as second language.

Findings	Conclusions and Comments
KeyMath gain 1.4 ($p=.01$). Woodcock Reading Mastery Test gain 2.2 ($p=.01$). Affective school attitudes improved ($p=.05$).	Affective measure showed freer attitudes.
Pre-intervention scores were: 1st term=35%; 2nd term=26%. Post-intervention: 3rd term=67%. Success with 15/17 HS & university students Moderate gain: 8; Startling improvement: 7	Changing personal history produces positive effect on learning ability by overcoming personal barriers with "L" procedures. A powerful 50-minute session.

Findings	Conclusions and Comments
Comparisons with a drug treatment group showed a stronger stabilization tendency with suggestology.	Classes using suggestology have a favorable influence on the course of neurotic disorders.
Pretest means favored the control gp ($p<.01$), but posttest means showed nsd between the groups.	Even though the experimental gp caught up with the control group, the experiment was considered a failure because of poor subject selection, inequality of groups, and invalid criterion test.
Pre/post exp. group signif. differences ($p<.05$) of +.65 yr (.24 yr for control) SALT gp was .86 higher than control at beginning of exp.	SALT learning rate was 2.5 the rate of controls. Better students profit most from SALT procedures (see Held, 1976).
Study skills and habits showed no statistically significant change.	Inexperienced SALT counselor/teacher conducted the sessions. Teacher must be adequately prepared for SALT presentations. SALT Findings often better during the second year of exp.
Statistically non-significant findings, but the trends were encouraging. Techniques are discussed.	Is this study the same as reported by Caskey (1976)?

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La Methode D'Erudition et d'Enseignement Suggestive-Accélerative (SALT) pour L'Etudiant avec des Problèmes d'Erudition. Une Revision Documentaire et une Méta-Analyse.

Nous avons revisés tous les livres et les articles pour les années 1976-1984 qui ont affairs a des résultats en groupes de controls/experimentals où tous les résultats et le progrès du programme et de l'utilization de la méthode d'érudition et d'enseignement Suggestive-Accélérative (SALT) avec l'étudiant requérant de services spéciaux. Quarantecinq sources d'information ont été revisées pour l'analyse de la population, l'éxecution de l'étude, les trouvailles et conclusions. Ces études ont eu affaire avec des étudiants spéciaux dans les catégories de problèmes d'érudition et d'arriéres mentaux éducable, rattrapage de lecture, comportement/dérangement émotifs, statu socio-économique bas, classe de rattrapage en mathématique (comprenent les phobies en maths) bas/pauvre/sous-accomplisseurs, normal, surdoué et talenteueux. Une analyse important de trouvailles statistique a indiquer que SALT est une procédure qui s'annonce bien pour les peuples de nécessité speciale. Suggestions pour ameliorer les études a l'avenir sont donné.

Suggestiv-beschleunigendes Lernen und Lehren (SALT) mit lernbehinderten und anderen speziell bedürftigen Schülern: ein Literaturüberblick und Meta-Analyse.

Es wurden alle Bücher und Artikel von 1976-1984 durchgesehen, die sich mit Ergebnissen von Experiment- und Kontrollgruppenuntersuchungen oder von Lernfortschrittsuntersuchungen befassen, in denen suggesti-beschleunigende Lern- und Lehrmethoden an Studenten mit besonderen Bedürfnissen angewandt wurden. 45 Datenquellen wurden auf Zusammensetzung der Experimentgruppen, Untersuchungrahmen, Ergebnisse und Schlussfolgerungen hin analysiert. Diese Studien befassen sich mit Studenten in folgenden Kategorien: lernbehindert, emotionsgestört, aus niedrigen sozio-ökonimischen Verhältnissen stammend, nachhilfebedürftig im Lesen, verhaltens- und emotionsgestört, aus niedrigen sozio-ökonomischen Verhältnissen stammend, nachhilfebedürftig in Mathematik (einschliesslich Mathematikphobie), leistungsschwach, normal, begabt, und talentiert. Eine Analyse statistisch signifikanter Resultate deutet darauf hin, dass SALT eine vielversprechende Unterrichtsmethode für Studenten mit besonderen Lernproblemen darstellt. Verbesserungen für zukünftige Studien werden vorgeschlagen.

Aprendizaje y Enseñanza Sugestiva-Acelerada (SALT) con Alumnos con Impedimento de Aprendizaje y con Otras Necesidades Particulares: Una Revisīpn de la Literatura y un Meta-Análisis.

Todos los libros y articulos entre los años 1976-1984 que trataron con resultados de grupos experimentales/control o resultados sobre el progreso de programas utilizando técnicas de Aprendizaje y Enseñanza Sugestiva-Acelerada con alumnos exigiendo servicios especiales se revisaron. Cuarenta y cinco fuentes de datos se revisaron referente a la población de análisis, ellos trataron con alumnos especiales en las categorías de impedimentos de aprendizaje, retardados mentales educables, lectura remedial, transtornos emocionales/de conducta, status económico-social bajo, matemática remedial (incluyendo fobia a las matemáticas), realizadores bajos/limitados, normales, dotados y talentosos. Análisis de resultados significativos estadisticamente indicaron que SALT es un procedimiento con promesa para poblaciones de necesidades particulares. Sugerencias para la mejora de estudios futuros se mencionaron.

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Salt, Suggestopedia and Other Accelerative Learning Methods in Japan and Europe

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Abstract. During the last six months of 1984, the author travelled to Japan and to several Western European countries, investigating suggestopedia and other accelerative learning methods. The original suggestopedic method as developed by Dr. Georgi Lozanov has undergone many changes, but only some of them in order to adapt it to the cultural and political situation of individual countries. These adapted versions are in some cases, i.e. in Austria and in Japan, so different from the original Lozanov method that only few ideas and techniques of suggestopedia are still evident. In Liechtenstein the most genuine suggestopedia was found and it has proved to be most successful. The investigations showed the necessity for adapting suggestopedia by considering the prevailing situation and satisfying the requirements of each individual nation on educational grounds only. No country should impose its brand of suggestopedia or other accelerative learning method on another country, since cultural and political differences are likely to hamper the success of these methods and even hinder their acceptance. Furthermore, the establishment of laboratories for learning research also in the West to provide reliable research data appears to be necessary in the quest for a wider acceptance of new methodologies and techniques.

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Last year I spent seven months in Japan and Europe in pursuit of SALT, suggestopedia and other accelerative learning methods. I visited institutions, schools, universities, psychologists, teachers and friends in pursuit of my objectives. My first stop on this most interesting odyssey was Tokyo, where I was led to the Institute of Suggestology before I could drop my suitcases in a hotel after 17 hours in the air and in airports. After my second cup of tea there, I sensed that it would not be easy to find out the *true* state of accelerative learning in Japan. Japanese politeness is probably unsurpassed and so is saving face. Everybody I came in contact with was just wonderful in all sorts of ways, but rather evasive in answering my unfortunately rather direct questions. For days all I could find out was that all was well regarding SALT, but no detailed answers to my questions, not even phone numbers of people whom I knew were or had been actively involved in SALT. I became very frustrated when I realized that my direct approach was a culture shock to the Japanese. On my sixth day there, I was scheduled to speak at the Institute of Suggestopedia about SALT in Australia. After five hours of a rather one-way conversation, suddenly doors opened. I obtained addresses, phone numbers, information. I was so perplexed that I asked why I was not given all this information when i inquired the first and second time? The answer was: We had to find out about you first before we wanted you to find out about us. What a revelation! Then I heard of Westerners and Japanese who are involved in SALT in private business and in universities, i.e., Sanno University, of Westerners who had conducted and would yet come to conduct workshops there. I heard--and this is now something that repeated itself in European countries--of positive emotional responses to workshops that in the end amounted to very little, because Western SALT is foreign to Japanese thinking. One Westerner in particular told me about the problems he has to overcome when he conducts English classes. I told him frankly that I could not help him since I was not familiar enough with the character of the Japanese people nor with their culture. Judging by all I heard at the Institute and later in Japanese homes, SALT in Japan is faced with very special problems. In my discussions I learned that numerous people believe or "make believe" that they understand SALT and apply it in various settings. It became very clear to me that few people, if any, have found the formula for adapting SALT to Japanese culture. One significant example: My Japanese friend was asked to help with the translation of the book SuperLearning into Japanese. Much of SuperLearning deals with the paranormal. In this proposed translation, all mention of anything paranormal will be eliminated, because according to the psychologist who is doing the translation, the paranormal has no room in Japanese society. I became very aware in Japan of the importance to consider community, teacher and student attitudes, etc., when one wishes to introduce SALT in a country. In fact, in my travels around Europe this awareness became almost an obsession with me. I am now convinced that no Westerner will ever be able to teach with SALT in Japan truly successfully, unless s/he has lived there for a very long time and knows Japanese life, culture and history, and with it, Japanese present and past concepts and attitudes to education extremely well. Japanese cultural attitudes are still so different from the Western attitudes that the success of Western SALT must be very doubtful. Dr. Hideo Seki appears to be one of the few serious researchers and past appliers of something that may become Japanese SALT. I would like to remind you here of his talk at the last SALT conference and its subsequent publication, "Final version of Japanese SALT." I don't believe in the finality of his version. He meets with a group of interested Japanese teachers and some Westerners who have been living in Japan for a number of years on a regular basis in the Institute of Suggestology in Tokyo, where they are trying to develop Japanese SALT, which at this point is still quite elementary. I heard of many language courses conducted by Westerners with Western SALT being only marginally successful, some being a failure, and some people have even sued their teachers. In one case, a so-called Japanese SALT teacher refused to speak to me when he was told that I wanted to discuss Japanese SALT with him and he said to my Japanese intermediary, who translated his answer to me, that he did not want to speak to anybody who was serious about SALT. I was shocked to find out how many people have jumped on the band wagon there and may be doing more harm than good. At this time our attention should be directed to Sanno University and to Dr. Seki and his group as far as the development and future of SALT in Japan is concerned.

My next stop was Copenhagen, where I spent several days with Vibeke Cristofoli, a teacher of mainly South American political refugees who were freed by Amnesty International and sent to Denmark, where they are living in a new form of ghetto, a hotel, and sustain their lives with permanent unemployment benefits. Why should they learn Danish, since they will never get a job, never have a home of their own, never really mix with Danish people, everything being provided for them? Vibeke teaches them Danish, but not only that, she teaches them *life*, how to forgive those who told on them under torture, how to gain mental health again after long periods of inhuman suffering. She learned from Charles Schmid of the LIND Institute and from Fanny Saferis in France. She developed SALT à la Denmark; more, she developed Danish SALT à la Vibeke, and she is most successful. Lately she has begun teaching stroke patients how to cope and, in the course of it, they learn to speak and communicate in other ways. She now conducts workshops all over Denmark and also in Sweden. It is fair to say that she is SALT in Denmark. He SALT is markedly different from any other SALT I have come across.

As in Denmark, there is great interest in SALT in Sweden, but only very few people actually use some or all of it. Swedish SALT is being developed cautiously and slowly. I spoke to a number of teachers in Tierp and Uppsala who showed tremendous interest but were rather timid in the application of SALT in the classroom. The Swedes need a society with strong leadership who promotes the Swedish version of SALT on all levels. I have come to believe that SALT teachers more than any other teachers need a backup. They also need a platform where they can discuss their successes and setbacks and their problems with each other; where they can re-energize and be reinforced. SALT is fragmented in most countries in Europe for several reasons; an important one being the lack of academic research and training and application. SALT will only achieve the necessary respectability for a wider acceptance once it has been taken seriously by universities. As long as it remains in the hands of business people and enthusiasts, it will not enjoy a real future, another conclusion I reached while on sabbatical last year.

That brings me to Finland and the wonderful Finns. They are still searching, investigating and trying out and they realized from the very start that they have to develop their own brand of SALT. At this point, they are inviting business people who teach SALT and other accelerative learning methods as well as academics. I gave lectures and demonstrations at several universities and colleges there in front of large audiences and I did it as a practicing academic, not just a theoretician. The Finns believe that SALT suits their mentality extremely well, but not American SALT nor Australian SALT. Therefore they are very eager to develop their own kind, and the universities and colleges invite foreigners to come and teach them. Already in 1982, they founded the Finnish Society for Accelerative Learning and were therefore the first Europeans to get organized. They realized the need for a backup system, for a discussion platform immediately and acted accordingly. SALT there is guided more or less by Peija Ilpola, who teaches suggestology at the University in Oulu and conducts workshops on request all over Finland. Gabriel Racle (Canada) and Charles Schmid (LIND, United States) left their mark in Finland, too.

My research took me to the Federal Republic of Germany or West Germany. I was amazed at how little SALT is known there. The translation of the book SuperLearning, which appeared in 1980, made some Germans jump on a band wagon of which they understood very little. At Bochum University, two colleagues had done some work with SALT, but not enough to make an impact either on the academic world or on the general public. At the Freie Universität Berlin-West, suggestopedic experiments have been conducted, showing no significant improvement of suggestopedic teaching over good conventional teaching, according to Prof. Dr. Ludger Schiffler. The Lozanov Institute, which has it head office in Vaduz, Liechtenstein, tried to get established in Cologne, but without success. The appearance of Lernen ohne Stress or SuperLearning on the bookshelves of bookstores changed this picture to a degree. SuperLearning courses, SuperLearning games, SuperLearning cassettes have since appeared on the market in abundance. I examined some of them and was amazed at what their originators consider to be SuperLearning. As long as SALT remains on that level, it will not become respectable and, therefore, it will not be accepted by many Germans and most certainly not by German educational authorities. West German SALT does not exist yet. In academic circles, there is very great scepticism regarding SALT. I firmly believe that no outsider will be able to convert West Germany to SALT. The conversion has to come from within. Foreigners who have conducted workshops there have been severely criticized afterwards. Again, it is a matter of cultural, educational, political differences, etc., that counteract the spread of SALT. I gave lectures at the Universities of Heidelberg and Heilbronn, where I came across the scepticism on the part of the academics, while the students and the general public quite often responded with an emotional and positive acceptance. But that is not enough. Only scientific data--and there is not enough of it available--might eventually change the situation for SALT in Germany on a larger scale. I came to the conclusion that as long as SALT is not taught as a methodology in universities and teachers' colleges, as long as its superiority over other more conventional methods cannot be proved by hard scientific data, as long as we rely mostly on emotional responses by teachers and students to the method--and emotions don't last--so long will SALT not have a chance to survive.

My next stop was Vaduz, Liechtenstein, where I visited the newly- established Lozanov Institute. I reported on this visit already in both the SALT and the ALSA newsletters. The Lozanov Institute, under its educational director Tony Stockwell, began its operation in Liechtenstein in January 1984. From August 27 to September 15, a test course was conducted at the high school in Vaduz. By courtesy of Mr. Felix Imhof, the business director of the Lozanov Institute, and Dr. Weiss, the school psychologist of Liechtenstein, I received a copy of the report of that test course. I am now relying heavily on the contents of this report and on a three-hour discussion I held with Dr. Weiss two months after the end of the course. The Lozanov Institute entered negotiations to conduct a suggestopedic experiment in one of the classes of the Liechtenstein high school. A third year class, consisting of 18 boys and girls between the ages of 15 and 16, was selected to be taught English. A number of those students had an interrupted career in their school lives, as some had repeated classes, or they had been in special schools for slow learning students, etc. In other words, it was not a good class, probably not even an average class. Very few of them had had any English before. Classes were held daily from 8 a.m. to 1 p.m. except on Saturdays when class ended at 12 noon, with several breaks during the morning. On Monday and Thursday afternoon, a program complimenting the course was offered to the students. The school psychologist as well as the students' regular teacher were participants at all sessions. Tony Stockwell taught the class. Towards the end of the course, the class teacher was included in the teaching to assist the transition from the suggestopedic to the ordinary teaching situation once the course was over. As far as the complimentary program was concerned, it included English games, e.g., cricket, and films and a barbecue. Reading through this report on the course, two things caught my attention. First, there is neither physical nor mental relaxation at the beginning or for that matter at any point in the course. I asked Mr. Imhof about that and he said that the Institute followed Lozanov's format as it is being used now. He also said that the Institute was kept up to date with the latest developments in the Bulgarian Institute. The second difference from SALT is the passive concert session which is being given at the end of *every* lesson. The course appears to have had all other ingredients of a suggestopedic course, including games, songs and even a play at the end. The school psychologist, who admitted that he had never heard of suggestopedia before he met the directors of the Lozanov Institute, was most impressed. He was particularly impressed by the high level of motivation that this method achieved in the students, and particularly in that group of generally poorly motivated students. As far as he is concerned, the success of the experiment is most obvious in the motivational area. A second very obvious result of the suggestopedic teaching in that class was the observation that it is possible to increase the ability to concentrate even in those students who are markedly deficient in their ability to concentrate. As a third positive factor of suggestopedic teaching, the psychologist mentions the observation that the students learned and applied rules spontaneously and without explicit explanations. The students did not receive any kind of conventional assessment. In order to transfer suggestopedic teaching into the prevailing school system, some form of acceptable assessment will have to be established. Since this first experiment with suggestopedia was such a success, the psychologist recommended further experiments in language learning and also in reading for first graders. Furthermore, he recommended teacher training courses to enable Liechtenstein teachers to employ this method in their classrooms and thereby experiment with its effectiveness on several levels. The Lozanov Institute has since developed teacher training courses for the Liechtenstein school teachers to be conducted in May* in addition to its foreign language courses and business and management course. What is missing in this report is any data on actual language acquisition.** But comparative tests as well as formal and informal evaluations on student, teacher and parent reaction are to be extensively conducted in the two week test period in January and February, 1985. In his conclusion, Tony Stockwell made several points, i.e., he is totally satisfied with the psychological aspects of the course as well as with the established group dynamics and the learning effect. But he had expected more in regard to language ability. He puts the blame on the brevity of the course: 98 hours in three weeks. This will be rectified in the second phase.*** In the Lozanov Institute in Sofia, a course stretches over four to six weeks at three and a half hours per day, which seems to be a much better design. Most of us practicing teachers can never teach suggestopedically in an ideal situation, many of us have to make the best of a 50-minute period and therefore make allowances in every aspect of a course. Tony Stockwell's students were so motivated that they expressed the wish to continue their English lessons--an achievement unimagined for that particular group of students. The course was a success even if the expectations of the teacher were not totally fulfilled.

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*Teacher training courses for Liechtenstein teachers were conducted in 1985.

At the end of the course (September 14) the two directors of the Lozanov Institute held a meeting for 34 teachers and representatives of the Liechtenstein school system where they discussed this school experiment. Mr. Stockwell demonstrated to the audience the main elements of the suggestopedic method with practical examples. He stressed the importance of identity change, the dual plane, visualization whereby he meant drawing a picture of the partner, and visualizing text material, body language, student praise and corrections, indirect testing, corrections "via the back door," translations, the two concert sessions, the use of the ball, games and songs. The attending teachers were given ample time to ask questions and discuss all aspects of suggestopedic teaching. The school psychologist summed up his impressions of the experiment by highlighting the very pleasant teaching/learning atmosphere, the incredible motivation of the children, the ability to concentrate even of those children who have concentration problems in conventionally conducted classes, the type of student who was involved in this experiment, namely those who are school leavers due to poor self-concepts and low achievements, the new framework for the school, the excellent results achieved, the basic attitudes, namely ability, success and

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**Data on actual language acquisition was collected during the second phase of the experiment and is available from the Lozanov Institute, Vaduz, Liechtenstein.

***The second phase of the course took place from January 28 to February 8, 1985.

joy, the students' predeliction for games, the decrease in problems of legasthenic students.

To these comments, the class teacher of the students added two further observations, i.e., no problems arose in motivating the students to sing, contrary to experiences he has had in conventional teaching, and the difficulties the proper way of correcting the students pose in conventional teaching. The Liechtenstein government has seconded the headmaster and deputy headmaster for a one-year sabbatical to the Institute and a five-year plan has been presented by the school authorities for further tests at all school levels in several different subjects. I was invited to attend that afternoon session, but unfortunately could not attend, because I was in Vienna at that time to follow up the Austrian school experiment on accelerative learning. Instead I obtained first-hand information from Liechtenstein teachers who were involved in the experiment.

I will now report to you on the Austrian experiment. From 1974 to 1978, a four-year school experiment with suggestopedia was being conducted in Vienna with direct involvement of Dr. Lozanov and the Austrian Ministry of Education. It involved two elementary school teachers of two first grade classes who taught their pupils reading, writing and arithmetic. Dr. Lozanov trained the teachers, participated in the preparation of the parents of the pupils involved, and advised and administered the experiment either during his extended stays in Vienna or from his Institute in Bulgaria. After two and a half years, the experiment was assessed and found to be very successful. Twelve points were found to be most noteworthy, i.e., higher achievements both quantitatively as well as qualitatively, the positive connotation of school, instruction and learning, a trust relationship between pupils and teachers, steady increase of motivation and creativity, a reduction in aggression on the part of the pupils, no repeaters in the class, that is, all students passed at the end of the year (in those days approximately 8% of the pupils repeated the year due to poor performance) and increased interest on the part of the parents which indirectly aided the motivation of the children, to name a few. On the other hand, one can call these the negative aspects of suggestopedic teaching if one wishes, a heavy burden is put on the teachers who teach suggestopedically since the teacher must not only learn the method and how to adapt it, but also produce the teaching and learning aids, must individualize instruction, must maintain closer contact with the parents of low achievers, and must spend much more time and energy in the preparation of lessons. Psychologically the teacher trades the certainty and comfort of working with the existing aids for improvisation, pioneering and enormous effort. Ultimately the question remained: will the quickly acquired knowledge be retained over long periods or will it soon be forgotten?

Despite all this the experiment was continued. The Austrian government concluded a cultural agreement with the Bulgarian government and it established the Boltzmann Institute for Learning Research. But then the problems began, most of them connected with Dr. Lozanov himself and his availability or rather non-availability for the projects. There is no official version why suggestopedia à la Lozanov ceased to exist as an officially- sponsored methodology in Austrian schools. Naturally, a lot of stories are circulating in Austria regarding those reasons. The fact remains that in 1978, the Institute of Psychology under the chairmanship of Prof. Giselher Guttmann and in cooperation with the Boltzmann Institute for Learning Research and with the Federal Pedagogical Academy of Vienna began a school experiment called "Angewandte Lernspsychologie im Unterrichtsgeschehen" (applied learning psychology in the teaching situation). This project was to last initially for four years. I visited the Boltzmann Institute in 1981 for the first time and observed several classes in session. I was most impressed with what I saw, particularly since my own teaching career had begun as an elementary teacher in a small Austrian elementary school in 1954. What I saw in 1981 was totally unrelated to what I had been taught when I attended teachers' college in Austria. The influence of Dr. Lozanov is, of course, very noticeable, even if the developers of this new method do not give him any mention, let alone credit, in their report soon to be published in book form. I obtained a copy of this report recently and I will now base my comments on that manuscript as well as on my observations of 1981 and 1984.

First of all, I must point out that acceleration of learning is quite definitely not the objective of the Austrian method. The report stressed this unequivocally. What the Austrian researchers hope to achieve is the elimination of stress and the fostering of joy in learning, as far as the students are concerned. In regard to research it is the duty of the Austrian pedagogical academies to develop and test new methods and, if found to be valuable, to pass them on to future teachers in the course of their training. Guttmann et al. believe that they have developed a basic model for teaching/learning interaction in which they attempted to create conditions for learning, retention and recall which respond to proven facts in learning research. In the course of four years, more than 40 classes from the elementary and secondary level in three federal states took part in this project. Prof. Guttmann and Dr. Vanecek, both from the Institute of Psychology of the University of Vienna, guided this experiment scientifically. For lack of time, I will not discuss the theory that lies behind the

Guttmann/Vanecek Model. Instead I will discuss the actual teaching situation. The teachers involved in the project were trained in seminars of a total of 120 hours. Additionally, they received constant supervision and further schooling. The training included research in activation, neurophysiology of learning, research in verbal learning, motivation, fear and stress management and social learning. The parents of the pupils in the experimental classes needed to be informed, too. A minimum of homework was expected from the children considering that the value of homework has never been proven scientifically. This was, of course, unexpected and new for the parents. They were also told about the relaxation training and the purpose of the music their children would now experience in their classes.

The Guttmann/Vanecek Model and Its Application

The model which I am going to present to you is to be seen as a framework for elementary schools since only in elementary school we have a situation where the students have the same teacher all day. At the beginning of every lesson, there is a preparation phase consisting of relaxation exercises, whereby the teacher has to decide whether the pupils' activation level needs to be lifted or lowered. In order to increase the activation level, the teacher will do one of three things: muscle tension and relaxation exercises according to Jacobson, or activation through games involving movement, or listening to activating music with or without rhythmical movements. In order to lower the activation level, the teacher will ask the students to count their breathing while sitting in a relaxed position, or to listen to relaxing music, or to "let music tell stories," whereby relaxing and pleasant imagery can be evoked, or to concentrate on just relaxing (without tensing) the body while in a comfortable position as in autogenic training. Relaxing music has the following characteristics: a slow and adagio-like tempo of a basic pulse of between 60 and 80 beats. The dynamics have to be contained within the range of 20 decibels. As a rule, melodic intervals are not to exceed the octave. A regular tempo without rubato or clearly noticeable accelerandi, is another criterion. The selected volume of the chosen music is not to be greater than that of the voice at a softer than normal level (approximately 40 to 50 decibels). All selected pieces were tested by teachers and students in regard to their semantic differential and if any of them deviated from the ideal piece of relaxing music to any noticeable degree, that piece was eliminated. The following pieces were selected:

Relaxing music:

Beethoven	Romanze für Violine und Orchester, F-Dur 1. Satz der Mondscheinsonate

	2. Satz aus der Sonate pathétique
Dvorak	Amerikanisches Streichquartett, 2. Satz
Grieg	Morgenstimmung aus der Peer-Gynt-Suite
Mendelssohn	Ouvertüre zum Sommernachstraum (Schluß) Notturno aus der Musik zum Sommernachtstraum
Schubert	Forellenquintett, 2. Satz
Smetana	Die Moldau (Die Quelle der Moldau, Mondschein; Nymphenreigen)

Activating music

Brahms	Ungarischer Tanz Nr. 5
Dvorak	Slawischer Tanz,g-moll Amerikanisches Streichquartett, 4. Satz
Grieg	In der Halle des Bergkönigs
Händel	Feuerwerksmusik
Milhaud	Braziliera aus "Scaramouche"
Tschaikowsky	Russischer Tanz (Trepak) aus "Der Nuáknacker"

Immediately after the relaxation, a short musical signation is given. Each subject has its own signation. The following signations are used:

Subject	Music (approx. 30 sec)
Writing	Schubert: Ballettmusik Nr. 2 aus Rosamunde
Mathematics	Schubert: 5. Symphonie, Beginn
Reading	Prokofieff: Peter und der Wolf
German Language	Schubert: Sonatine für Violine und Klavier, D-Dur

General Subject	
Social Studies	Leopold Mozart: Fanfare aus "Musikalische Schlittenfahrt"
Natural Sciences	Leopold Mozart: Musikalische Schlittenfahrt

The pupils are told quite frequently of the value of relaxation. Immediately following the signation it appears to be best for the dramatics of the lesson to show them a slide, an overhead projection or work on the blackboard in order to lead them directly into the information phase in total quietness and relaxation. The teachers are free in choosing their preferred technique, i.e., they can use one or more of the following possibilities: a short lecture by the teacher, an experiment, a discussion, group work, individual work, work with a partner. Any mechanical and routine work is to be avoided. The classroom is, of course, arranged in a way that makes movement and flexibility possible. The detailed formulation of the criterion/criteria of the lesson play an important part in the Guttmann/Vanecek Model. In the center of their thinking are the following two criteria:

a) What should the pupils know or be able to do? (knowledge, technique)
b) How well should they know (be able to do) it? (ability, difficulty)

Furthermore, the teachers were taught to think in terms of overall goal and goals within the overall goal. The example given from the subject Social Studies shows the district with 20 streets as the overall goal and four times five streets as four goals within the goal. This aspect demonstrates very clearly the reversal to Lozanov's thinking of "stuffing," of presenting more material than normally.

The information phase is followed by a pause. During the pause anything can be done that is not in any way related to the subject matter. Most often the pupils engage in musical activity, including work with Orff instruments and rhythmic dance.

The next phase consists of the first repetition of the new material in a way that is not boring or repetitious. This is followed by the second pause and then the second repetition, which brings the end of the lesson on day one, a fifty-minute lesson. It is now clear that this model is particularly suited for elementary schools where one teacher teaches all subject areas. Instead of musical activities I saw teachers go into arithmetic or reading during the pauses in a first-year elementary class. A third repetition takes place on day two and a fourth one after a few days.

One of the most valuable learning aids in this project is the learning card system. It consists of a box with five partitions. Factual material to be learned, e.g., vocabulary, spelling, rules, formulas, etc., are moved from one section of the box to the next according to how well they have been learned or forgotten. Items that are safely stored in the memory are finally discarded from the box. Research proved clearly that this learning card system was invaluable particularly for the less able children. It enables the pupils to regulate their learning themselves, it avoids overkill of learning material, it gives the pupil a permanent control mechanism of his/her knowledge and it increases motivation noticeably. The teachers discuss with the children which items should be put on the cards. The pupils are also allowed to make individual cards for things that interest them beyond the material presented in class. Instead of boxes the teachers allow the pupils to use envelopes. In the upper classes I saw the students use envelopes marked "to be learned," "to be repeated" and "examination material." The latter contained the question on one side of the card and the answer on the other. The Guttmann/Vanecek manuscript explains in great detail the psychology of the learning card system which I will not discuss here. A card system has been established for general studies, foreign languages and spelling.

The pauses within the lesson are justified by the biochemical processes which are necessary to translate the new information or learning material from the short-term into the long-term memory. As far as the repetitions are concerned, the researchers refer to Ebbinghaus' curve of forgetting. The first repetition should not differ much from the original presentation of the new material. For that purpose worksheets and other techniques are used that make it possible for the teacher to check the work of the pupils. The second pause is twice as long as the first one. It is used to review old material. Here the learning card system, question and answer games, pair work, etc., can be employed, to serve long-term repetitions. The second repetition of the new material on day one should include variations from the original input. If about 90% of the pupils are able to do the second repetition alone without help, then the third repetition is given in the form of homework, otherwise it is done on the following day in class. A few days later a fourth repetition takes place. Long-term repetitions are conducted no sooner than after two weeks.

The Guttmann/Vanecek Model also includes a [illegible]r-tutorial program whose value I will not discuss here since it was developed in the United States and is already widely used there.

Several controlled experiments have been conducted in Austria using this model and all of them point to a total success.

As I mentioned at the beginning of my discussion of the Austrian experiment, acceleration of learning and thereby going beyond the normal curriculum of the respective class is not an aim of the Guttmann/Vanecek Model. Nevertheless, it happened every time. On an average the pupils covered at least half, in several cases all of the following year's work in one year. More important to the researchers and teachers than the speed-up of learning was the quality of work the pupils achieved and the side benefits, like much improved verbal and written expression in the mother tongue as well as in the foreign language, much increased interest in reading, and considerably better spelling. Here an interesting observation was made. One group of pupils had been involved in the Lozanov program. These pupils were 17% behind the control groups as far as spelling was concerned, because in the suggestopedic classes, spelling was almost totally disregarded. Two years of work with the learning card system could not eradicate the spelling deficiency caused by suggestopedic teaching. In math, in the upper years of the elementary school, the pupils achieved higher marks compared with the control groups and accelerated their material up to one year. The experimental groups increased their marks by almost 16%.

In summary, it can be said that the Guttmann/Vanecek Model as tested in 42 classes in three federal states of Austria, is a successful model in all aspects of learning that were tested in controlled experiments. It satisfied the teachers, parents and students alike. It proved to be stress-free and enjoyable for the pupils; it increased the quality of their work and accelerated their learning remarkably. Observing several classes at work, I could not detect any increase in creativity. In fact, I find it quite interesting that in the report on the experiments, there is no mention of creativity. It is now in the hands of the Austrian educational authorities and of the politicians to decide whether or not this model will be implemented in the Austrian school system on a general basis. In any case, it will most probably be taught at the teachers' colleges. From then on it will be up to the individual teacher to implement it or not as long as the Ministry of Education has not made an official recommendation.

In conclusion, it can be said that Lozanov's work is now known worldwide. In the West many varying degrees of adaptations, from strong adherence to the 1980 version of Bulgarian suggestopedia as found in Liechtenstein to the Guttmann/Vanecek Model in Austria that emerged from Lozanov's research but developed in an altogether different direction, many attempts at accelerating learning have been made. The lack of research centers in the West where, for instance, factual data on the psycho-physiological aspects of learning and teaching could be produced, make accelerative learning not easily acceptable to the majority of people, academics and the general public alike. Additionally, inefficient teacher training and, if available at all, its high costs either cause teachers to give it up too quickly or prevent them from undertaking training at all. Unless we can overcome these obstacles, accelerative learning in any shape or form will remain in the hands of enthusiasts and esoteric teachers and never make a great impact in education.

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SALT, Suggestopedia et D'Autres Méthodes d'Erudition Acéère au Japon et en Europe.

Au cours des derniers six mois de 1984, l'auteur de cet ouvrage a voyagé au Japon et à plusieurs pays European, il a sondé suggestopedia et d'autres méthodes d'érudition accéleré. La méthode authentique suggestopedique dévélopé par le docteur Georgi Lozanov, a subi plusieurs changements, mais seulement quelques un, pour bien l'adapter a la situation culturelle et politique de chaque pays individuel. Ces adaptations sonts en certain cas par exemple en Autriche et au Japon complètement differents de la méthode originale de Lozanov, que seulement quelques idées et quelques techniques sont encore en évidence. On a trouvé a Liechtenstein la méthode la plus originale qui a eu le plus grand succès. Les enquêtes ont montrées la necessité d'adapter suggestopedia en considérant la situation prévélente, et de satisfaire aux exigences de chaque pays au sujet uniquement d'éducation. Aucun pays ne doit imposer sa méthode d'érudition accélérative sur un autre pays puisque les differences culturelle et politique peuvent géner le succès de la méthode et meme entraver son acceptation. De plus, l'établissement de laboratoire dans la recherche d'érudition également dans l'ouést pour fournir la recherche d'information fiable nous apparait nécessaire dans la poursuite pour une plus grande acceptation de nouvelle méthodologies et techniques.

SALT, Suggestopädie und andere beschleunigende Lernmethoden in Japan und Europa.

Während der letzten sechs Monate von 1984 bereiste der Autor dieses Artikels Japan und mehrere westeuropäische Länder, um Suggestopädie und andere beschleunigende Lernmethoden zu untersuchen. Die ursprüngliche suggestopädische Methode, wie sie von Georgi Lozanov entwickelt wurde, hat viele Änderungen erfahren. Nur wenige der Änderungen geschahen allerdings, um die Methode der kulturellen und politischen Situation im jeweiligen Land anzupassen. Diese Adaptionen sind in manchen Unterrichtsmethode Fällen, z.B. in Österreich und Japan, so verschieden von der ursprünglichen Lozanovmethode, dass nur

mehr wenige Ideen und Techniken von Suggestopädie erkennbar sind. Die echteste Form von Suggestopädie wurde in Liechtenstein angetroffen, und sie war auch die erfolgreichste. Die Untersuchung hat gezeigt, dass die Anpassung von Suggestopädie an die herrschenden Verhetnisse und die speziellen Erfordernisse der jeweiligen Nation nur aus pädagogischen Gründen erfolgen sollte. Kein Land sollte seine Art von Suggestopädie einem anderen aufzwingen, da kulturelle und politische Unterschiede den Erfolg dieser Methoden erschweren, wenn nicht gar ihre Aufnahme verhindern können. Überdies erscheint es notwendig, Laboratorien für Lernforschung, die verlässliche Forschungsdaten sammeln, auch im Westen einzurichten, um eine grössere Akzeptierung neuer Methoden und Techniken zu erreichen.

SALT, Sugestopedia y Otros Métodos de Aprendizaje Acelerado en el Japón y en Europa.

Durante los últimos seis meses de 1984, el autor de este trabajo viajó Japón y a varios paises de Europa Occidental, investigando sugestopedia y otros métodos de aprendizaje acelerado. El método de sugestopedia original desarrollado por Dr. Georgi Lozanov ha experimentado muchos cambios, pero solamente algunos de estos con el fin de adaptarse a la siituación cultural y política de paises individuales. Estas adaptaciones son, en algunos casos, i.e., en Austria y Japón, tan diferentes del método Lozanov original que solamente pocas ideas y técnicas de sugestiopedia siguen evidentes. La sugestopedia más auténtica se encontró en Liechtenstein y ha resultado ser la más efectiva. Las investigaciones mostraron la necesidad de adaptar sugestopedia considerando la situación predominante y satisfaciendo las necesidades de cada nación individual solamente en el campo educativo. Ningún pais debe imponer su tipo de sugestopedia u otro método de aprendizaje acelerado sobre otro pais, porque diferencias culturales y politicas pueden interferir con el éxito de estos métodos e incluso con su aceptación. Además, el establecimiento de laboratorios para estudios sobre aprendizaje también en el oeste ofreciendo datos de investigación confiables parace ser necesario en la búsqueda de mayor aceptación de métodos y técnicas neuvas.

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A Study of the Effects of Attitude on Short-term and Long-term Information Retention

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Abstract. The purpose of this study was to determine the effect of attitude on information retention. The first portion of the investigation, reported earlier in the SALT Journal, revealed significantly higher scores on vocabulary retention when both music and imagery were employed in the learning process than when the conditions of music only or no treatment were employed.

In this study a Pearson product-moment correlation between affective attitude ratings and performance on the vocabulary retention test showed a significant relationship between reported attitude and scores on the criterion test. Implications would suggest the value of positive attitude in information retention.

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This study represents the second portion of a two-part investigation. In the first portion, reported earlier in the SALT Journal, 4 (4), the effects of music and of music plus imagery were shown to increase short-term and long-term retention of vocabulary words when compared to self study without the inclusion of music or imagery. In the second portion of the investigation, the effects between subject attitudes and test scores were explored.

While educators and psychologists have long held that learner attitudes influence learning, the neuroscientific findings in support of this are relatively new. In the 1950s and 1960s the work of James W. Papez outlined a neural circuitry connecting the emotional and memory control portion of the brain (the limbic system) with the thinking/learning portion (the neocortex).

The limbic lobe, seated in the interior of the brain, contains the thalamus, hypothalamus, amygdala, hippocampus, and septum pelucidum, among other structures. The thalamus receives sensory inputs from sight, hearing, touch and taste, apparently translating these messages into forms "readable" by appropriate sections of the neocortex (Nauta and Feirtag, 1979). These neocortical sections to which the message first go are termed primary areas (e.g., primary visual cortex, primary auditory cortex). These primary areas account for approximately one-fourth of the total neocortical structure.

Each primary receiving area connects to associative areas, which integrate sensory inputs from two or more primary areas. The associative areas, in turn, eventually connect with the amygdala, the hippocampus, or both. The amygdala and hippocampus are the major influences on the hypothalamus from the neocortical regions.

The amygdala controls the affects "rage" and "fear." Information coming to it from the associative areas (intellectual, integrated information) can be disrupted if the learner is in a state of either rage or fear. The amygdala, as with the other limbic structures, serves as a screening device and "determines" whether or not a message will pass onward (Pribram, 1968).

The hippocampus controls views of expectation/actuality, short-term memory formation, and influences tension/relaxation by inhibiting the reticular activating system (RAS). The RAS is part of the control mechanism for heart rate, blood pressure and respiratory rate. The hippocampus also determines whether the message will go onward (O'Keefe and Nadel, 1978).

Both the amygdala and hippocampus are powerful influences on the hypothalamus, as mentioned earlier. This structure controls the fight/flight response and a major portion of the setting of long-term memory. In addition, the hypothalamus controls the involuntary muscles surrounding the airway passages, arteries, urinary tract veins, and intestines, and controls the glands. It is, in effect,, our ultimate controller; for if this organ is destroyed, the body dies. Heart rate, blood pressure and respiration are controlled here first, then by the RAS (Nauta and Feirtag, 1979).

Although the role of the septum pelucidum in learning and memory is not fully understood, this structure does influence feelings of pleasure/pain and reward/punishment. It thus influences motivation.

The human limbic system acts as a message relay center, mitigator of emotions, and control for vital body functions, short-term and long-term memory. It is because of this that the limbic system plays such an intriguing role in learning. If the brain is busy dealing with various negative emotions, it may have difficulty relaying messages regarding classroom learning. We see this in the poor test performance of students who stand in fear of the testing situation, those who come to expect their own poor performance based on previous failures, and those stressed by fight/flight responses to negative classroom environments. On the other hand, evidence from accelerative learning and teaching research shows that positive environments help create positive results. A study of the relationship between the brain structures clarifies this phenomenon.

The research question under investigation is whether positive attitudes toward the learning experience correlate with greater performance on immediate and long-term retention tests of vocabulary learning. The research hypothesis is that this would, indeed, be the case. Positive attitudes were measured by responses to questionnaire items which asked the learners to rate the degrees of relaxation, happiness, liking, pleasantness and alertness associated with the learning experience.

Design

Seventy-four subjects from masters level library science classes comprised three groups in this study. Subjects served in one of three treatment conditions: music plus imagery, music only, or no-treatment. All subjects received a pretest identical to the posttest and a list of the defined words to study. Additionally, all subjects received Affective Rating Scale #1 twice during the learning sequence and Affective Rating Scale #2 following the immediate criterion test and again after the delayed criterion test.

Subjects in the music-plus-imagery group heard Handel's "Water Music" and the experimenter read aloud the words. Subjects in the music-only condition heard the same music. No-treatment subjects did not hear music nor the words read aloud.

Instruments

A vocabulary list of 25 words as developed by Schuster (Schuster & Mouzan, 1982) was the pretest and the posttest. The retention quiz had the stimulus 25 words presented alphabetically on the left hand side of the page with their definitions presented alphabetically on the right half of the page in a matching format with five distractors included to minimize guessing. Each subject received a list of vocabulary words to study. These words were all defined with the same definitions as those found on the pretest and posttest; however, the words were presented on the page in a random order and without the five distractor definitions.

The study used two affective rating instruments, each of which utilized a nine-point scale from strongly disagree to strongly agree. The first affective instrument was divided into three statements: "I feel relaxed," "I feel happy," and "I like participating in this experience." This instrument measured student attitudes immediately after they heard three minutes of music and again after studying the vocabulary list. The second affective instrument was divided into two statements: "This was a pleasant experience" and "I feel alert." This scale measured feelings following the immediate posttest and again following the one week delayed posttest.

Hypotheses

The following hypotheses were formulated for the study.

1. There will be a significant difference in the scores from the Affective rating instruments when both imagery and music are used during the learning sequence than when there is no music and no imagery during the learning sequence.
2. There will be a significant difference in the scores from the Affective rating instruments when music is played during the learning sequence than when no music is played during the learning sequence.
3. There will be a significant difference in the scores for the Affective rating instruments when music and imagery are used during the learning sequence than when music only is used during the learning sequence.

Results

This study was divided into two parts: vocabulary retention under three conditions and attitude in each of the three conditions. (The first part, vocabulary retention, was reported in the SALT Journal, 1982, 7(4).

Hypothesis 1, 2 and 3 were tested by analysis of variance to determine if a significant difference existed between groups on the Affective rating instruments. A Pearson product-moment correlation was employed to determine whether or not there was a relationship between the results of the Affective rating instrument and the immediate and delayed criterion tests.

Table 1 shows the F value obtained in the three-way analysis of variance between groups for each of the Affective rating instruments for hypotheses one, two and three. Analysis of variance between groups for instrument #2 (following the immediate criterion test) revealed a significance of F = 3.367, $p < .04$; therefore hypotheses one, two and three are supported in the case of Affective rating #2.

Table 1

Analysis of Variance Between Groups for Each Affective Rating Instrument

	N	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
Affective Rating #1	74	2 between 71 within	42.36 2027.55	21.18 28.56	0.742
Affective Rating #1 Repeated	74	2 between 71 within	140.96 2533.53	70.48	1.975
Affective Rating #2	74	2 between 71 within	98.19 791.61	49.09 11.15	3.367*
Affective Rating #2 Delayed	74	2 between 71 within	52.40 791.61	26.20 11.15	2.350

*Significant at .05 level

Table 2 breaks down Affective rating #2 by group means, revealing that Group One, the control group, was significantly lower and that Group Three, the experimental group of music-plus-imagery, was significantly higher in the group mean ratings of attitude.

Table 2

Affective Attitude Rating #2 Following Immediate Criterion Test by Groups

Group	N	Means	Standard Deviation
1	24	10.667	4.35
2	32	12.875	3.39
3	18	13.444	3.79

Note. 95 Percent Confidence Interval for Mean = 11.384 to 13.210. ANOVA between groups significant at .05 level.

A Pearson product-moment correlation matrix was constructed to ascertain significant intragroup relationships between the variables. These findings are presented in Table 3. There is a significant relationship at the $p < .05$ level between the first administration of Affective rating #1 with Affective rating #2; between the repeated administration of Affective rating #1 with Affective rating #2; between Affective rating #2 and the immediate criterion test; and between the delayed administration of Affective rating #2 with the delayed criterion test.

Table 3

Pearson Product Moment Correlation Coefficients for Affective Rating and Vocabulary Retention Scores

	Affect #1	Affect #1 (Repeated)	Affect #2	Affect #2 (Delayed)
Affect #1 (Repeated)	0.8085*			
Affect #2	0.6172*	0.7608*		
Criterion Test (Immediate)	0.0434	0.0375	0.3665*	
Criterion Test (Delayed)	----	----	----	0.2383*

*r must exceed 0.2243 to be significant at the .05 level.

Summary

Those who were in the imagery-plus-music group gave the sessions the highest affective ratings and had the highest posttest scores on both the immediate criterion test and on the one-week-delayed test. Those who were in the control group gave the sessions the lowest affective ratings and had the lowest posttest scores at both administrations. These results suggest that if the teacher employs methods that the students like, their retention may be enhanced. However, it is equally valid to infer that if the students learn more with given methods that they rate those methods more highly. It is important to note that in this experiment the students were not informed as to their test results prior to completing the affective rating scale. This gives somewhat more import to the first possible implication. It is suggested that a study be designed to control for both possibilities.

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Une Etude des Effets D'Attitude a Court et a Longs Termes de Retention D'Information.

L'objet de cette étude était de determiner les éffets d'attitudes sur la retention d'information. La première partie de l'enquete a apparu auparavant dans le journal SALT, et a revéler de points considerablement plus élèver en retention vocabulaire quand on employait l'imagerie et la musique dans le processus d'érudition, beaucoup plus que quand on employait seulement la musique san traitement.

Au cours de cette étude, le Pearson produit-moment de corrélation entre les evaluation d'attitude affective et une représentation sur l'éxamen de retention vocabulaire a démontrer un lien important entre les points et les attitudes rapporté sur l'éxamen critère. Les implications suggérent la valeurs de la pensée positive dans la retention d'information.

Eine Studie über die Auswirkungen der geistigen Einstellung auf die kurzzeitige und langzeitige Behaltung von Information.

Der Zweck dieser Studie war es festzustellen, welchen Einfluss die Einstellung auf das Behalten von Information ausübt. Der erste Teil der Untersuchung, der in einer früheren SALT Journal Nummer erschien, zeigte bedeutend bessere Ergebnisse in Vokabelbehaltung, wenn sowohl Musik als auch Verbildlichung im Lernprozess angewandt wurden, als wenn nur Musik oder keine besondere Behandlung angewandt wurde.

In dieser Studie zeigte eine Pearsonsche Korrelationsuntersuchung zwischen affektiver Einstellung und Leistung im Vokabelbehaltungstest eine bedeutende Wechselbeziehung zwischen angegebener Einstellung und Testergebnis. Dieses

Resultat weist auf den Wert einer positiven Einstellung für die Behaltung von Information hin.

Un Estudio de Los Efectos de Actitud Sobre Retención de Informacion a Corto y Largo Plazo.

El propósito de este estudio fue el de determinar los efectos de actitud sobre la retención de información. La primera parte de la investigación, comunicada anteriormente en el SALT Journal, reveló puntuaciones significativamente más altas en retención de vocabulario cuando música e imaginería se utlizaron en el proceso de aprendizaje que en condiciones en que solamente música a ningún tratamiento se utilizaron.

En este estudio una correlación Pearson entre valoraciones de actitudes afectivas y ejecución en un test de retención de vocabulario mostró una relación significativa entre actitud y puntuaciones en el test criterio. Consecuencias parecen sugerir el valor de actitudes positivas para la retención de información.

J. of the Society for Accelerative Learning and Teaching, *1985*, *10*(*2*)

BOOK REVIEW

The Accelerated Learning Process in Science: A Handbook for Teachers

by John R. Grassi, Ph.D.
Published by:
A.L.P.S. Method
369 Singletary Lane
Framingham MA 01701

John Senatore
University of Southern Colorado

I like this book for what it says with clarity and precision, for what it provides any person wanting to implement learning alternatives. I recommend it for personal and institutional libraries, for persons new to implementing accelerated learning processes, for practitioners to compare and contrast their implementations; and for anyone who wants to let someone else know about models of accelerated learning. I like that Grassi directly addresses the reader in this spiral-bound, computer- assisted handbook with color-coded sections. Of course, science teachers may be the greatest beneficiaries of this handbook intended for them.

Grassi talks to readers in four sections:

Introduction to Suggestopedic Theory

This is one of the clearest, most readable presentations I know.

The Accelerated Learning Process in Science (A.L.P.S.)

I heartened, cheered his presentations of the 1st Curriculum: Teaching One's Self, because it is the *necessary* reminder we do not share a common world; the 2nd Curriculum: Language, because it necessarily reminds us we teach the language we are communicating in, that suggestions are constant and that continually we are presented with opportunities for literacy across the curriculum. Stressing science as the art of processes seeking patterns that connect may up-end some of us to unlearn "the" scientific method.

Preparing an A.L.P.S. Curriculum

I vigorously support his stress on writing behavioral objectives; also, I celebrate the formula and verbs he reviews that assist us in writing behavioral outcomes so students may clearly know what to learn; likewise, I urge us to re-learn, or learn, the questioning techniques reviewed here for developing the thinking skills of recall, understanding, application, analysis, synthesis and evaluation.

Sample A.L.P.S. Science Unit Elementary Grades
Thank you for letting us see how you did it! I have something I can try, modify.

Sample Stories/Dialogues: All Grade Level (six)
Again, thanks for letting us see how you did it, how I might do something. Completing Grassi's handbook are acknowledgments, an introduction and a bibliography of music and written resources.

This handbook fills a need: Models of accelerated learning demonstrated explicitly in another subject area. A type of breakthrough it is; a model that can be tried, copied, modified, it is; a worthwhile contribution to educational reform, literacy learning, refined teaching skills, science learning and learning to learn, definitely it is.

I asked a university chair of science who has trained science teachers to examine Grassi's book. He noted the amount of work involved in designing effective learning units (45-50 hours for Grassi), the joy, the fact that these could be adapted for university-level courses; he said he'd like to try some of these activities.

Grassi presents a model (a strength since it is not the truth, the way) for teaching science to children in elementary, middle and secondary students in the public schools of Boston and Lowell, Massachusetts. Results included: teachers enjoyed teaching science, lost their anxieties while teaching science units, covered two to three times as much content, found entry points for common learning experiences regardless of students' reading abilities, previous learning histories, analytical skills; students enjoyed learning science and demonstrated excellent recall; administrators wanted accelerated learning applied in other subject areas.

A.L.P.S. or V.A.L.L.E.Y. (Various Alternatives of Learning Laws for Empowering Yourselves), Grassi moves more of us to the choice: Do we really want and value learning in a process- curriculum? A.L.P.S. models an alternative for empowering more people to live in our information-technological society whose task will be learning to learn rapidly and joyously.

J. of the Society for Accelerative Learning and Teaching, 1985, 10(2)

Book Review

Magic for Everyone: Alternative Reading Activities For the Disabled Reader (A Holistic Approach)

by Dean F. Held and Richard W. Mason
Superior, WI: Superior Educational Press, 1985

John Senatore
University of Southern Colorado

Pain was among my first reactions to this spiral-bound, copied book. Had the Wicked Witch of the East zapped me?

No. The subtitle did. I hurt myself, as if I were Alice scrunching down a narrowing tunnel, reading: "Magic" (Yes!) "for Everyone" (Definitely!) "Alternative Reading Activities" (Bow in praise for active-modes of learning!) "for the Disabled Reader" (OUCH!)

I reached for a pencil to replace disabled so the title would read "for the enabling of readers." My Wizard guide warned me to read, think, consider further. I also hurt myself when I asked myself, "Is this print job a manifestation of USA citizens speaking with forked tongues about literacy?" I cringed a little with my evaluation that Part 1 seems academic and academic is a pejorative and some students still believe nothing real and important happens in schools; some students who drop out still ask, "Why should I interrupt my education by going to school?" And my Wizard whispered, "Now what? Pain pushes you where?" "To an Invocation," I replied.

I invoke the Wizard to weave my words to a magic that compels you to buy a copy of this book--and do it. With my word-filled wand the Wizard loans me, I sprinkle the minds of those who want to witness integrated teaching/learning. I touch my wand to the hearts of those in any academic category who want to see designs for achieving intended outcomes utilizing several models of teaching, several psychologies. With my wand, I dry the eyes of those crying as they bump into the limits of their models, "What else can I do to reach these people?" With a great, general sweep of my wand, I empower all those who want to examine alternatives that may help us co-create living literacy around us.

"This book represents a radical, but sound, departure from the traditional methods of teaching reading," the authors wrote in Part 1: Preface. So, who will accept the invitation to change from what doesn't work? Be you a parent, a seeker of models to imitate and install, a teacher, a researcher, check this book. Do re-set your mind with the suggestion, "Here are ways to enable readers."

Chapter 1: Introduction stresses that methods, not teachers, not students, are where the breakdowns occur. Here are the authors' assumptions, a clear presentation of Lozanov's Barriers to Suggestion, an introduction to the Holistic Process. Here are some answers to the cry, "But what else can I do?" I delighted in the table concluding this chapter.

Then these guides lead us through a fog-filled forest revealing new territory (Chapter 2: Putting It All Together: The Lesson). I wish more manuals were written this well. I tapped my wizarded, now becoming hairy, feet with joy as I completed the section of the role of diagnosis in the Holistic Method ("Diagnostic testing is not only unwarranted at this point, but it is also unnecessary."). The section on Language Experience is an adequate review or introduction, and liberating! Reviewing right-left-brain assumptions, the authors emphasize that the Holistic Method reaches troubled right-brain learners. I have come to dislike this new-argot; yet my dissolving fingers signed V's! Supportive research to build credibility concludes this chapter (I wanted it to compel others to rush to a planning period and try the Holistic Method). The emphasis in the summary on remembering tweaked my shortening nose; I sniffed an assumption about recall as a reading skill that was not developed (and it is developed in the activities).

Part 2: Reading Activities contains 50 Intuitive/Holistic Reading Activities, 4 stories, a parent letter, and a bibliography. My bedewed eyes sparkled a magical question: "Are you guys being sneaky? You, in effect, say 'Trust us. Do it and find out what we are referring to when we say intuitive/holistic.'" The formats are more than exemplary. Illustrations on the student record sheets promote multisensory learning. These activities are really open outlines for teachers and learners to fill in, for this is not a book you read but a book you do.

A demon sneaked past my Wizard; he hissed doubt into my mind. I asked an elementary school teacher to examine this book, check with Teacher/Advisees and use it with students. "I think these activities could be ideal," she reported. She passed on to me student record sheets and compositions. I moved from doubting endarkenment to enlightenment. Students said they were "fun, interesting and we'd like to do more."

Pavlov, hear me now. You proved that things that happen together get associated. When acts of literacy are associated with pleasure and necessity, we will have a nation of enabled, literate persons. Here are ways to connect acts of literacy with pleasure and necessity. Come to this book any way you can. Do check it out.

Before I return my wand to the Wizard, Held and Mason, I lase you with my creative intention: May a wealthy publisher take your work, pep it up, illustrate it in coats of many colors. I would take that as one piece of evidence that some USA citizens mean what they say and say what they mean when they talk about a nation of literate persons. ZAP! We're enabled!

J. of the Society for Accelerated Learning and Teaching, 1985, 10(2)

BOOK REVIEW

Successful, Non-Stressful Learning: A Guide to Teaching the Lozanov Method

by Stephanie S. Merritt
Published by:
Learning to Learn
3768 Front Street #10
San Diego CA 92103

John Senatore
University of Southern Colorado

"This manual is to be used in conjunction with the training of teachers in the Lozanov Method of language learning," Merritt wrote. Its purposes aim at two groups of teachers: those who can use the Method in its entirety and those who may extract portions, individualize them creatively to particular circumstances and needs. Purposes stated: Provide teacher trainees a clear understanding of the Method and the tools with which to carry it out; provide teachers with a comprehensive model to extract portions who work with and in conditions that are "less than ideal." Merritt succeeds. I recommend this spiral-bound manual for its intended readers, for the curious and the beginners with any subject-area background who want to consider using the Method, and for practitioners to compare, contrast information and implementation and to offer others who seek examples, understanding, background.

I wish the Introduction were available as a pamphlet so well does it tell who Georgi Lozanov "is," how we learn, how the brain works, how a Lozanov teacher teaches, examining our belief systems, self-awareness, conventional teaching versus freedom-to-learn, the Lozanov Method in junior high school, evaluation, mental reserves, creativity, foreign language learning (systems concisely contrasted with emphasis on successful internatlization), those amazing results and long-term recall and use.

Merritt's manual next outlines in "Foreign Language Teaching Cycle" and provides instructions for the preparation period, a pretest, student instructions, and a text example. "The Text" reveals major, critical differences between the Method and other methods; careful reading shows that the Method is an integrated, complex, deliberate teaching/learning design. Also for those who may have never seen the structure/ content of scenes, this section outlines Topics of Conversation and Grammar and Syntax for nine scenes.

"La Aventura Latina: A Conversational Spanish Manual for use with Accelerated Learning TEchniques" by Merritt, John Evans and Enrique Junquera Santana includes original songs and a role-identity introduction. "Grammar" is reviewed as it is used, scripted.

"Sample Lesson Plans" comes next for four sessions. "Sample Teaching Activities" features highlights of scenes 2 through 9. These illustrations are solid, clear, recipes for actions.

In her "A Rationale and Analysis," Merritt justifies choosing new identities, the use of the puppet and how to handle mistakes. Working with the principles of purposeful distraction, the author shares "Games and Songs." Again, I like the conciseness, the clarity. "The Physical Environment and Peripheral Stimuli" fulfills purposes for intended readers. "The Influence of the Arts" introduces another component of the Method. I like the author's personal experiences in "The Use of Suggestion in the Classroom" and elsewhere in the manual. "The Anti-Suggestive Barriers" are presented succinctly and lucidly.

"Music and Suggestology" contains too much of the dualistic model for me, but again, Merritt fulfills her intentions. Without a present coach (or some kind of self-viewing-audio feedback device), I don't know that implementing concert-readings can be done merely by reading these sections of the manual. The "Musical Program" list, followed by a self-awareness practice, suggests self-learning and integration, a more-than-desirable component for teacher training.

"Evaluation and Testing" begins by pointing out "It is not easy to measure joy, self-confidence or openness, and very little value is given to these kinds of achievements in the field of education. However, the academic results that emerge from those feelings can be measured." Yes. And how Merritt has done this is written here: Oral testing, written translations and pretest/posttest.

"Dealing With the Less Than Ideal" reveals the author's solutions for those teachers in those environments. Solid provokers and tools here, so committed teachers can now eliminate their excuses and join the ranks of the Method achievers! "The Glossary" suffices for the manual's intended users; so does the bibliography.

I infer from reading passages in the manual that the author studied with Lozanov in 1979, taught Spanish at the Lozanov Institute of San Diego, and in 1981 became the administrator of that Institute, training teachers in the Method. I liked seeing what she has done, offered and offers us. This "main-stream THE Method" manual makes a solid English contribution to foreign language teaching.

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THE JOURNAL OF THE SOCIETY FOR ACCELERATIVE LEARNING AND TEACHING

Guidelines for Contributors

The Editor welcomes submission of manuscripts on an interdisciplinary nature relevant to all aspects of suggestive learning-teaching-therapy counseling within the theoretical and procedural confines of Suggestology and/or Suggestopedia. The JOURNAL FOR THE SOCIETY OF ACCELERATIVE LEARNING AND TEACHING will publish a wide variety of articles - including critical reviews, theoretical analyses, speculative papers, case studies, quasi-experimental studies, as well as reports of empirical research (basic or applied) of major significance. The basic focus is Suggestopedia theory , research and application.

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Research on a Humanistic Language Teaching Model*

Wil Knibbeler
University of Nijmegen

Abstract. The Explorative-Creative Way is a new theoretical model of language learning based on a synthesis of approaches such as Silent Way, Suggestopedia, Community Language Learning and Confluent Teaching. The model's operating principles are exploration, creativity, motivation to communicate, affect economy, listening to oneself, level-appropriate input, autonomy, risk-taking and self-confidence on the part of the students. The necessary teacher characteristics to promote these student characteristics are discussed. Teacher guidelines and the outline of a research project to test this new model conclude the paper.

* * *

Introduction

For more than two decades now, new approaches in foreign language methodology have been generated separately in different places all over the world. For a comparative review of these orientations, called humanistic or non-conventional, I refer to Madsen (1979), Stevick (1980), Benseler & Schulz (1980), Blair (1982), British Council (1982), Roberts (1982). The most important of these approaches are the Silent Way (see Gattegno, 1976), Suggestopedia (see Lozanov, 1978, Belanger, 1978, Saferis, 1978), Community Language Learning (see Curran, 1976), and Confluent Teaching (see Galyean, 1976a, 1976b, 1977). In spite of the differences, there is one feature which all these language teaching approaches have in common, and that is the emphasis on affective and social features in foreign language learning, although this is not so obvious for the Silent Way as for the other ones. We have to bear in mind, however, that these language teaching approaches have been developed by scholars who are not linguists. It is therefore interesting to note that Krashen (1981) has developed a theory of language acquisition and language learning which corresponds in many aspects to the basic principles formulated by those educators who are not linguists (see also Krashen & Terrell, 1983). A closer study of these relationships resulted in the concep-

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*This is a revised version of my paper: The explorative-creative way, in Wil Knibbeler & Marij Bernards (eds.) *New Approaches in Foreign Language Methodology*. Nijmegen: AIMAV, 1984, 136-145. I am grateful to Earl Stevick, Arlington, Virginia, for his comments on the original article.

tion of a synthesis which we decided to call The Explorative-Creative Way (see Knibbeler, 1983). The aim of this paper is to define the Explorative-Creative Way, to delineate its operating principles, to describe the teacher's behavior and qualities, and to outline current research on The Explorative-Creative Way.

Definition

The first step in the genesis of this approach is a description of the good language learner. For this description, we rely in particular on Naiman et al. (1978). The question is to what extent the behavior of successful learners has its origin in genetic factors or in educational factors during early childhood. Even though we have not yet answered this question, we may say that success in language learning goes hand in hand with certain personality traits and/or learning styles. This starting point will lead to an outline of the good language teacher. This way of thinking presupposes two facts. First, the teacher's task is not only to transfer linguistic knowledge or to develop linguistic skills, but also to foster those attitudes and habits which make the language learner a more skillful language user, that is, a person who is dexterous in manipulating the linguistic knowledge acquired. Second, language teaching is successful to the extent to which the learner is willing to communicate in the target language and is disposed to search in her/his own resources for the linguistic tools needed to communicate. These resources involve self-discovery and creativity which appear to guarantee success in language learning. The teacher's main task is to create an environment which stimulates the students to be creative searchers. This leads us to the definition of the Explorative-Creative Way as an approach in which the teacher encourages the students to investigate the target language and to tap the linguistic resources currently available to them in order to have them produce a maximum amount of new meaningful utterances. This definition results in a number of operating principles which are closely related.

Operating principles

The concept of the good language learner dictates the methods by which the teacher can create good language users.

Exploration. The language learner who continually searches for a sound, a word, a structure or an expression, or for the meaning of a linguistic element, will get a solid command of the target language. Most beginners in language learning are "false" beginners because they already have some linguistic knowledge from which they can profit. Consequently, the only task for the language teacher is to supply what the learner cannot find or to structure what the learner cannot structure. The teacher acts upon each sign of curiosity coming from the student and presents new elements in an unclear way in order to foster further exploration. The correct form of an utterance is often the ultimate result of an inquiry conducted by the individual student, assisted if necessary by classmates. The most successful language teachers are not necessarily those who explain clearly. Sometimes confusion stimulates language exploration and language use, and successful exploration increases the motivation to learn.

Creativity. In an attempt to search for new and at times novel answers or questions, the student must rely on the capacity to invent new combinations and explore alternative responses. This is a very creative process and creativity is therefore a critical part of exploration. Each linguistic creation is an activity which accelerates the learning process, because the language act is basically a creative act. Consequently, the teacher will invite the students to produce new utterances beyond the programmed exercises. All procedures which lead to new utterances, such as games, improvisations and fine arts, will play an important role in the classroom.

Motivation to communicate. Motivation to communicate is as important as the motivation to learn, because communication is the key to language acquisition. Progress is rapid as the language learner succeeds in using the target language to meet the communicative needs of the Here and Now. One learns more in situations in which one is involved in communication than in situations in which one is concerned with the language only. Thus language use is part of language learning. In order to facilitate this process, the teacher responds to the student's needs to communicate and gives priority to those language elements which have to be used at that particular moment for the particular idea, opinion or problem with which the student is concerned. The teacher adjusts instruction to address the events of the Here and Now, and thus provides the students with the opportunity to say in the target language what they really want to say. Here again, the students are advised to focus on getting their message across, not merely search for words.

Affect. Motivation to communicate is often a function of affect. An utterance generated by an emotion is a whole-person event. Consequently, the teacher notices emotions which appear in the classroom. The teacher then stimulates the students to express their feelings in the target language and presents the words, structures, expressions, interjections and intonation patterns they need in order to voice these feelings. It should be remembered, however, that the teacher needs to do this in a rather vague manner in order to stimulate the students' explorative attitude. On the other hand, the teacher has to make sure that the students have at their disposal the linguistic tools necessary for expressing their feelings, i.e., the proper words and phrases.

Economy. The language learner will become proficient in the target language because of the emphasis on producing a lot of language from a small vocabulary. Thus the teacher stimulates students to tap fully the resources of their linguistic knowledge instead of extending their vocabulary all the time. The teacher will urge the students to engage in in-depth investigation and usage.

Listening to oneself. Explorations in the classroom are not restricted to the domain of lexical items, structures and idioms, but they start from the very beginning, as soon as the students acquaint themselves with the phonetic system of the language. An adequate pronunciation and proficient oral comprehension depend upon the power of discrimination which the student acquires with regard to her/his own articulative repertoire. Consequently, the teacher stimulates the students to listen to their own attempts at pronunciation and slowly presents pronunciation models and signals to the students to see if their trials are correct, close to or remote from the target. If the teacher refrains from presenting a model, this does not mean that no models are generated in the classroom. On the contrary, models created as a result of exploration in learning are more effective than models which are only perceived.

Level-appropriate input. Sometimes the linguistic environment is not useful for the language learner and the message does not come across, because the speed of the utterance is too high, the register is unfamiliar, or the level is too complex. On the other hand, language produced by classmates is usually comprehensible and therefore the language learner will profit more from it. A simplified code is more useful, especially in the initial stages. Consequently, the teacher will often call upon students to speak and will stimulate students to listen to classmates.

Autonomy. The language learner who can decide which learning route to take, the learner who often takes initiatives, will become independent of the teacher and the learning process will not stop after he has left school. It is important that the teacher respond to students' initiatives, and subordinate the prepared lesson plans to their learning. Such a teacher will not stick doggedly to a prefabricated lesson plan, but will respond to the spontaneous initiatives of the class. If the students are not used to taking initiatives, the teacher will stimulate them to make the first move just by holding back his/her intentions. As long as the teacher remains in the background and is slow to give the native or near-native model or the final solution to a linguistic problem introduced, students will be challenged to keep searching for the appropriate target language elements. In short, the teacher must keep a low profile. This does not mean that the teacher should be swept back and forth by every suggestion that occurs to the students. Decisions as to which learning route students are to take are sometimes too large or otherwise inappropriate for students. Thus, there must be some limit to autonomy and the teacher must be the person ultimately responsible (see Stevick, 1980:16-33).

Risk-taking. The language learner who is made to solve individual problems and who is often referred to personal linguistic resources is obliged to make decisions. In many cases this means taking risks. Risk-taking in situations of doubt is a condition for rapid language learning. Moreover, the learner who is in the habit of taking risks in cases of doubt has learned to live with uncertainty. This attitude fosters tolerance of ambiguity which furthers the development of language comprehension. The teacher, therefore, encourages the hesitant student to overcome fear. In order to stimulate the students to take risks in language use, the teacher introduces language games and exercises which stimulate spontaneous speech. The teacher advises the students not to ask how to say what they want to say but rather first to imagine a number of possible utterances and then to select the most likely possibility This attitude does not imply complete tolerance of errors Risk without occasional loss is not risk at all but only a false kind of security If the teacher tolerates all errors the students never get the chance to experience such losses

Self-confidence. Self-confidence is a prerequisite for risk-taking and, therefore, for rapid language acquisition. On the other hand successful risk-taking enhances self-confidence The teacher should neither severely criticize nor enthusiastically praise the students language use The teacher should be convinced that everybody will become a proficient language user if they are allowed to work at their own speed The teacher needs to show a positive attitude towards students If the teaching does not produce the desired results, the teacher will be inclined to impute this failure to personal incapacity rather than to intellectual or affective weaknesses of the students Thus, the teacher creates an atmosphere of nurturing security

The above ten operating principles are interrelated i.e. one element is a natural consequence of the other in the sense that together they make up a coherent system

The Teacher

We have described teaching behavior derived from the concept of the good language learner As a matter of fact, the learner is supposed to be explorative and creative If the learner is not there is a chance to become so. The question is to what extent students who are not explorative or creative by nature will be able to acquire such behavior The answer depends upon the teacher's capacities for making students explore and create Therefore, we will first define the characteristics of the teacher in the Explorative-Creative classroom and second, present some guidelines which need to be observed

Teacher's personality. The Explorative-Creative teacher is understanding and can easily empathize with someone else's position and share ideas and feelings with students The teacher is able to notice subtle events which take place in the classroom and is quick to observe the most delicate feelings existing among the students The teacher makes functional use of all that happens spontaneously in the classroom The teacher rearranges the lesson plan by taking unexpected "turns" initiated by the students into consideration The teacher must welcome unpredictable events and is able to improvise when the need arises. The teacher is also sometimes a dominant person who may intervene when the students are in danger of losing their way or are getting frustrated The teacher is the expert who controls the learning process and whom the students can rely on when they feel lost: the teacher orchestrates and organizes spontaneous reactions from activities by the students, and is a skillful classroom manager The teacher is confident This feeling of knowing that one is able to do a job successfully creates a climate of security in a class which seems to struggle with real problems. The teacher is ready to wait, and adapts the rate of teaching to the learning pace of the individual student. Finally, the teacher is highly interested and privileged to participate in the learning process. The teacher becomes more and more an explorative and creative person, because of the need to keep searching for the various learning processes which take place in the classroom, and the attempt to find, or rather to create, solutions to problems which are often unpredictable.

The above characteristics constitute the picture of the ideal Explorative-Creative teacher. The Explorative-Creative Way is not a method which one either adopts or rejects, rather it is a model which every teacher can approximate. It usually takes time to implement it authentically.

Practical implication for the classroom

In the Explorative-Creative Way the students get their initial input from the teacher who must observe the following instructions.

First, before presenting a new word, structure or expression, before explaining a meaning, and before giving the pronunciation or the spelling of any linguistic element, the teacher should try to find out to what extent the students are able to find the solution, to use the appropriate utterance, or to grasp the meaning on the basis of the knowledge of their mother tongue or of other languages, even from the very beginning. On the other hand, wild guessing should be avoided, since this could be frustrating.

Second, the initial input is somehow structured, in the sense that the teacher has established a framework which is not shared explicitly with students. Sometimes, the students put in circulation words or structures the teacher considers to be unsuitable for that specific stage in the learning process. In that case, the demands of the students are ignored. At other times, the students may not come up spontaneously with words or structures which the teacher considers to be useful at that moment. In these cases, the teacher gives vague hints to lead the students where they need to go. Thus, in the Explorative-Creative language classroom, the students get the feeling that the material to work on is open, while in fact the teacher imposes constraints on the language material which will be dealt with.

Third, when the teacher wants the students to learn a notion, a function, a morpheme or a structure, the students are never told beforehand what the linguistic aim of the classroom activity is. It is left to the students to ask questions about this.

Fourth, when the teacher gives a stimulus to speak, for example, cartoon or a text, the primary task is to wait for any spontaneous response. After that, suggestions for stimulating speech are provided.

Fifth, course materials are incomplete. All basic material has to be completed or structured by the students. There is no grammar book. During the course, students make up their own grammar, formulate their own grammar rules, invent their own grammatical examples.

The Explorative-Creative Way is still being developed, and its ultimate form will depend upon the outcome of research.

Research

Research currently in progress aims at answering the following questions:

What is the impact of the teacher's personality on the implementation of the Explorative-Creative Way?

Bialystok et al (1979:7) state that: "it is evident that the specific behaviors used by two different teachers may vary greatly even though they are implementing the same teaching program, or even presenting the same lesson. If these individual differences have significance for the teaching/learning process ... then a general reference to overall methods or approaches is inadequate for the purposes of describing second language teaching and relating that teaching to learning outcomes." This author (1982) found in an empirical comparative study that, although Suggestopedia and the Silent Way are based upon opposite educational theories and are implemented through quite different teaching techniques, the results in the experimental groups varied little. It appeared that in spite of the researcher's endeavor to control the teacher variable, it was the teacher who was responsible for any significant variations in the outcome rather than the approach adopted.

To what extent does intended behavior coincide with actual behavior?

Fullan (1982) shows that there is often a gap between what teachers think they do and what they actually do in the classroom. If we want to validate innovative approaches in foreign language methodology, we need better insight into what actually happens in the classrooms of teachers who claim to be innovative.

To what extent can teachers be educated to implement the Explorative-Creative Way?

Even if we are able to describe the features of the most effective teaching approach, this information may not be useful if we do not succeed in meeting the requirements for implementing this method on a large scale. For instance, if we have to make our teachers participate in a long in-service training program, or if we need exceptionally gifted teachers or experienced teachers to implement our teaching model, this model may prove to be impractical. In order to answer this third question, repeated measures are planned during the training period. We remind the reader, however, that the Explorative-Creative Way is not a method to adopt or to reject; it is rather a model the teacher can approximate gradually, and this process may take a long time.

To what extent do successful teachers who are unacquainted with *the Explorative-Creative Way already teach in accordance with the Explorative-Creative model?*

The answer to this question will enable us to validate our model externally. It would be worthwhile to know if the theoretical basis of the model is supported by educational facts. It is also important to know if our model is complete as it is, or if we are neglecting important additional features. The problem of how to define the successful language teacher and which criteria to use for selection remains. We found some answers to these questions in Sanderson (1983), who describes case studies of the methods used by nine successful foreign language teachers in different types of comprehensive schools.

How do students respond to the Explorative-Creative model?

In the Explorative-Creative class, the students' own initiative, resourcefulness and creativity are continually called upon. Previous school experiences do not require these skills, and therefore students may initially feel uncomfortable. One also might question whether the teacher's reticent behavior enhances student motivation, and whether the dimensions and intensity of this motivation change as the students become more experienced in this teaching approach.

In order to answer the five research questions above, the following instruments are used:

First, an observation grid, to be filled in by observers who are familiar with the Explorative-Creative model. For methodological issues on the construction and the use of observation schemes, I refer to Bailey (1977), Fanselow (1977), Freudenstein (1977), Long (1980) and OISE (1983). Our observation scheme deals with only four characteristics, i.e., Exploration, Creativity, Affectivity and Motivation to communicate, because the other ones cannot be scored by observable behavior. The observers score student behavior as well as teacher behavior. This enables us to define to what extent the student behavior has been stimulated, allowed, slowed down or hindered by the teacher.

The second research instrument is a questionnaire to be filled in by the same observers as mentioned above, as well as by the students and by the teacher. The questionnaire includes the observable characteristics of the Explorative-Creative Way and asks about teacher behavior and student behavior. It consists of ten precoded questions with a five-point scale and a space for comments after each question.

The third research instrument is formed by impressionistic reports to be written by 'connoisseurs' as defined by Eisner (1979). This author describes the forms and functions of educational connoisseurship and educational criticism. He advocates a kind of educational inquiry which is qualitative in character and which takes its lead from the work that critics have done in literature, theatre, music and visual arts. Ochsner (1979) makes a distinction between the nomothetic tradition of science and a hermeneutic mode of inquiry. He claims that these two approaches to science have to be considered as two kinds of research with equal status. In our project the connoisseurs are requested to capture how the teacher and the students interact, and what happens inside the heads of teachers and students. They are supposed to express their thoughts and feelings in a spontaneous way. The teacher is not allowed to read their reports.

The fourth research instrument is formed by diaries to be written by students and teachers on the basis of guidelines which indicate directions without coaxing. The diarists are supposed to write down their feelings and impressions spontaneously and not to worry about spelling or handwriting. The teacher is not allowed to read the students' diaries.

The last research instrument is a standardized personality test to be filled in by the teacher.

The informants in the current project are the students, the teacher, observers who are familiar with the Explorative-Creative Way, and observers who are not. The data to be collected in the project are quantitative and qualitative in nature. The frequencies in the observation grids are correlated to the scores of corresponding behavior in the questionnaires. An analysis of the diaries, the connoisseurs' reports and the comments in the questionnaires is based on which of the ten characteristics of the Explorative- Creative Way are mentioned, with what profile, and which new features are mentioned and with what profile.

The project will answer questions which can be considered to be relevant for a better insight in recent views on foreign language teaching. The project is distinguished by the diversity of the instruments used, and its methodological importance lies in the fact that qualitative data are tested by comparison with quantitative data. Answers to the question how language teachers who hold modern views on foreign language teaching actually behave in the classroom, and how students experience this teaching may result in a rationalized training of foreign language teachers.

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Recherche Sur un Modele d'Enseignement de Langue Humaniste

La Methode Creative-Explorative est un nouveau modele theorique de langue d'erudition base sur une synthese d'approche tel que la methode Silencieuse, Suggestopedia, l'Erudition de Langue Communautaire, et l'Enseignement Confluent. Les principles d'operation du modele sont l'exploration, la creativite, la motivation de communiquer, l'affectivite, l'economie, etre a l'ecoute de soi meme, le niveau approprie d'information, l'autonomie, courir des risques, la confiance en soi de la part des etudiants. Les caracteristiques necessaire de l'enseignant pour premouvoir les carateristiques de l'etudiant sont developes menent a une representation de l'enseignant exploratif-creatif ideal. Les reglements de l'enseignant et l'expose d'un projet de recherche pour mettre a l'epreuve ce nouveau modele conclut cet article.

Erforschung eines humanistischen Sprachlehrmodells.

Der entdeckend-kreative Weg ist ein neues Modell des Spracherwerbs, der auf einer Synthese verschiedener Methoden basiert ist, z.B. Stiller Weg, Suggestopädie, Gemeinschaftssprachunterricht, und Zusammenfliessendes Lehren. Die Arbeitsprinzipien des Modells sind: Entdeckung, Kreativität, Motivation zur Kommunikation, Affektivität, Anordnung, sich selbst hören, dem Niveau angepasster Lehrstoff, Selbständigkeit, Risiko eingehen und Selbstvertrauen seitens der Studenten. Die notwendigen Lehrermerkmale, die diese Schülermerkmale fördern, werden entwickelt, und das Ideal eines entdeckend-kreativen Lehrers dargestellt. Hilfslinien für Lehrer und der Umriss eines Forschungprojekts zum Test dieses neuen Modells schliessen den Text ab.

Investigacion de un Modelo Humanistico de la Enseñanza de la Lengua

El metodo Explorativo-Creativo es un nuevo modelo teorico del aprendizaje del idioma, basado en una sintesis de proyectos tales como el Metodo Silencioso, Sugestopedia, Aprendizaje Comunitario de la Lengua y Enseñanza Confluyente. Los principios operativos del

modelo son: exploracion, creatividad, motivacion para comunicarse, afectividad, economia, escucharse a uno mismo, input al propio nivel, autonomia, asumir riesgos y autoconfianza por parte del estudiante. Las caracteristicas docentes necesarias para desarrollar este tipo de estudiante conducen a una imagen ideal del docente explorativo-creativo. Una guia para el maestro y un esbozo de un proyecto de investigacion para evaluar este nuevo modelo, concluyen la presentacion

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Survey Evaluating SALT Teacher Training Workshops At Iowa State University, 1976-1984*

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Abstract. We surveyed people who had attended a SALT Teacher Training Workshop at Iowa State University between 1976 and 1984 inclusively. We asked about teaching background, use of SALT components in teaching, value of workshop and possible improvements. We mailed out 171 questionnaires in two waves and achieved a return rate of 70% from people reached. Most of the former participants had quite positive things to say about the workshops. Two frequently mentioned requests for improvement were practice sessions and non-language demonstrations.

* * *

Introduction

A casual conversation during the Ninth International Conference of SALT in Houston, Texas, between the two authors started this research with the observation that there has been increasing usage of suggestology in the learning process in recent years. It was pointed out that Iowa State University has been contributing to the advancement of suggestopedia in this country since 1976, through the annual summer teacher training workshops. Questions were asked concerning how many and what kinds of teachers have attended, and from where, whether the SALT method had been incorporated into their teaching, and what the success rate might have been in employing this mode of instruction. This report is the results of our attempt to find some of the answers. The purpose of this study was to survey the teachers and students who had attended a SALT Teacher Training Workshop at Iowa State University from 1976 to 1984 inclusively. We solicited information on teaching background, use/non-use of SALT in teaching, value of workshops, and possible workshop improvements.

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*Appreciation is extended to all the former workshop participants who responded to our inquiry, thus making this report possible. The workshops were taught or supervised, by D. H. Schuster. Charles Gritton was a guest lecturer in many workshops and Lynn Dhority taught one workshop. An early version of this paper was given at the annual SALT conference in Washington D.C., May, 1985.

Method

A follow-up questionnaire was sent to all former participants in the Iowa State University Teacher Training Workshops from 1976 to 1984. A single-page format was devised that permitted checked or single word responses, and spaces for commentary where appropriate. The current professional status of the teacher, the subject matter and student-level taught, and the type of teaching institution were asked. Any change in teaching status since their participation in a workshop was solicited also. Second, a checked response to indicate the extent of the use of accelerated learning techniques was asked: either the use of a complete orchestration of the method or the use of isolated techniques, i.e., relaxation, imagery, music, etc. Space was provided for comment if a participant had not used the method at all since their workshop experience. Third, a response on a continuum line of ten intervals marking the relative value of the workshop experience was to be indicated. An explanation of this response was invited. Finally, comments for improvements in the workshop were requested.

Results

The geographical distribution of the workshop participants was ascertained. Of the 171 trainees over the nine-year period 149 persons came from 34 states, including Hawaii and Alaska, and 22 came from eight different countries: Australia, Canada, Chile, Colombia, S.A., Finland, West Germany, Japan, and South Africa. Refer to Table 1. Responses to the questionnaire came from 89 Americans in 32 states, and 14 persons from eight other countries. Twenty-four questionnaires were returned due to inaccurate current addresses. After the first mailing we received 64 replies and after 2 mailings, cumulatively we received 103 replies. The response to the questionnaires thus represented 70% of the participants with whom follow-up communication was possible. This is quite good for survey research.

The respondents to the questionnaire represented a wide spectrum of teaching professionals. Currently, sixty former participants are in academic teaching at all levels: primary through adult and continuing education, both in public and private institutions. Ten non-teaching in the academic field are either supervisors, principals, other administrators or consultants. At the college or junior college level, seventeen teachers responded, most of whom (n=9) teach foreign languages. Other disciplines, represented by a single professional in each, include art, commercial subjects, educational psychology, ESL, family relations and counseling, physics, and application of learning theory.

Sixteen secondary teachers, five of whom teach a foreign language, responded. Others are teaching in art, mathematics, science, reading, and guidance. With the exception of one teacher of mathematics in a private school, thirteen others are at the primary level in public schools. Ten respondents are currently associated with adult, continuing education. Three learning disabilities specialists are teaching at the primary/secondary levels. Sixteen respondents are not currently

Table 1.

Demographic characteristics of participants of SALT Teacher Training Workshops at Iowa State University, 1976-1984

Year	*Number of Students*	*Residency*			*Number Moved*	*Number Responding*
		Iowa	*Other US*	*Foreign*		
1976	17	16	1	--	9	6
1977	7	7	--	--	2	3
1978	2	2	--	--	1	1
1979	9	2	6	1	6	2
1980	9	--	8	1	2	6
1981	13	2	8	3	--	6
1982	29	2	24	3	3	17
1983-I	19	2	15	2	--	15
1983-II	44	5	32	7	--	31
1984	22	2	15	5	1	16
Totals	171	40	109	22	24	103

in the classroom for they are either degree candidates, students, or teachers on leave, retired, or substituting. Fourteen former workshop participants have become entrepreneurs or are commercially employed, generally in an education-related enterprise.

In the practice of the SALT method, 39 respondents indicated that they are using, or have used the complete orchestration; while, 35 others use, or have used, separate aspects of the method, such as relaxation, visualization, background music, and appropriate activation techniques. The usage of the SALT method or of the individual techniques have been utilized for time spans ranging from 1 course to 8 years. Some who presently are not continuing the use of SALT have changed teaching assignments and/or professional positions.

The questionnaire was designed for commentary if the respondents had not used their workshop experience in SALT methodology in their teaching. Thirty-three persons gave their reasons as follows (number in parentheses indicates the number of similar responses): currently engaged in preparing SALT materials, or, conversely, have no time to prepare materials (7); are students or candidates for degrees (4); found the method unsuitable due to nature of their positions in either school or business (10); could not use the method due to adverse administrative attitudes, or lack of environmental aids (equipment, room, furniture, etc.) (7), and currently unemployed or retired (8).

The results of the value of the workshop experience, as expressed on a continuum line with ten intervals, is given in the following table. Most participants valued their workshop experience highly. The number of respondents picking each value is given below the line (n=103 total).

Table 2

Value of Workshop Experience

	Low 1	2	3	4	5	6	7	8	9	High 10	no reply
No	0	1	3	2	3	8	7	22	16	38	3

In explaining their evaluations, the respondents favorably commented that the workshop:

provided excellent trainers and had a diversity of participants permitting a good exchange of ideas in a superior atmosphere (n=20)

provided information for personal benefit or for ancillary adaptations other than for teaching (n=20)

clarified SALT techniques and provided basic insights for application of the approach (n=12)

initiated further study in suggestopedia (n=9)

provided opportunity for an experiential workshop (n=6)

provided resource materials, including tape viewing in the SALT method (n=4)

provided insights on nature of brain function/humanization of learning (n=2)

provided accommodations that were convenient and satisfactory (n=2)

was subjectively rated 'wonderful, worthwhile, helpful, excellent, important learning experience' (n=11)

Some of the respondents were adversely critical in their evaluations because of:

the lack of demonstrative aid in teaching non-linguistic subjects (n=5)

the lack of professionalism of some personnel/poor choices of memory exercises/not presenting the content suggestopedically (n=6)

Thirty-five persons declined to comment on this item.

Although only 53% of the questionnaires contained responses to the final inquiry, there were many worthwhile comments offered for the improvement in teacher training. Six responses indicated that no improvement was needed in the workshops. All of the criticisms were categorized subjectively. The summary of improvement suggestions follows:

include practice teaching. (n=16)

demonstrate the use of SALT with non-language subjects. (n=8)

lengthen session of workshop. (n=7)

place more emphasis on networking people, resources, and video tapes. (n=6)

include: more "master" demonstrations by skilled trainers/ greater clarification of the concept of double planeness/ more activation techniques and examples of teacher creativity in establishing positive attitudes/ SALT research results and analyses of case histories/ text production. (n=12)

restructure the lesson format/ use only SALT method in presentations. (n=9)

include training and texts for the elementary level. (n=2)

include visitations to a practicing SALT classroom. (n=3)

improve the "delivery" of some lecturers. (n=4)

have advanced refresher seminars or workshops. (n=3)

combine the SALT workshop with SALT conference time. (n=2)

recognize and address the "dilemma" of being a student-in/teacher-of SALT simultaneously during the workshop. (n=1)

Discussion

While the focus of this report is on evaluating the SALT workshops in retrospect, some readers may ask what did the workshop cover? It started with Lozanov's book (1978) available in manuscript form in 1972, and continued with a manual of classroom applications (Schuster et al., 1976). Later workshops embodied material in the revised SALT book (Schuster & Gritton, 1985). Broad topics were: introduction to suggestopedia/SALT, theoretical principles, literature review, classroom productive principles, philosophical considerations for use, sequential classroom activities, and frequent demonstrations of techniques.

It is gratifying that the survey response resulted in a questionnaire return of 70%, giving our findings a high degree of sampling representativeness and validity. Responses were received from participants representative of all of the ten workshops (two were given in 1983). The responses indicated that the training sessions have attracted interested educators from a wide geographical area over the past nine years. It would seem that the seeds of suggestopedia have been provided for a potentially large educational field-- their germination and growth are dependent on the workshop participants.

The active users of the SALT method are about equally dispersed in all levels of academic teaching, from higher education to the primary level. Coupled with the interest shown among supervisors and consultants, a small nucleus for change in teaching practices has been realized in both public and private spheres of education.

Does a high degree of autonomy in the classroom contribute to the incidence of SALT usage? A few comments selected from the questionnaires may be informative.

> "Was strongly urged NOT to use breathing, relaxation last January 85 because it made some nervous. This city has a very conservative reputation." --Public High School Teacher (Spanish)

> "I attended the conference and the following workshop. Based on the information and practice I received there, I was able to return to my school, rewrite text materials and launch into my first quarter of SALT teaching ... That first quarter has been followed by four subsequent quarters in which I have attempted to perfect and polish my techniques. I have additionally used the SALT procedures in an accelerated summer course. The Ames experience was rewarding enough that I made arrangements for a colleague and me to attend an advanced workshop ... this past summer. This workshop was certainly valuable for additional practice, but the essential ideas and procedure had already been very clearly presented at Ames." --University professor (Spanish)

It may be significant for the propagation of accelerative learning that administrators and consultants are using their workshop experiences and incorporating them in their professional work.

> "I was a princial [sic] of an elementary school and involved some of my staff in training and implementation of this method. It was successful and since leaving public education I have been giving classes for UC and various school districts, with the hope of influencing education." --Consultant, teacher training

> "I am an experimental psychologist specializing in the experimental psychology of learning. Currently I supervise a program

(within the Children's Unit of a state mental hospital) that includes a classroom for developmentally delayed, behavior-disordered children. I have tried to interest the classroom teacher in the SALT techniques and have arranged to have a videotape shown to the hospital school faculty. At present we use physical tension releasing exercises, breathing, suggestion, and Steven Halpern/Kitaro/Deuter music". --Supervisor within mental hospital

Eight respondents to the questionnaire have developed special adaptations of the SALT method in the business world. Three sample commentaries illustrate:

"My first attempts at applying the SALT Method of teaching were at the University of_______________, West Germany, where I was employed as a lecturer for English/ American studies, (language, literature, linguistics). I taught language and literature suggestopedically, with a great deal of success. Upon termination of my contract, (the state coffers are empty) I was invited to continue giving SALT classes on an hourly basis, however, there was a lot of preparation to do (we write all our own materials) and the hourly wages are low, so after a while I ran out of idealism since I couldn't even cover my expenses ... I now write commercial cassette courses, am on the editorial board of .. a fledgling suggestopedic journal, and training teachers for ... franchise language studios which are opening up all over West Germany ... " --Commercial writer in suggestopedia

From a brochure describing a special seminar:

"Without a common language, communication among and between managers cannot take place effectively or efficiently. Budgets, balance sheets, and income statements are all part of finance, the common language of business, and required knowledge for executives. In this course, an enjoyable and relaxing way of learning foreign languages (the Lozanov Technique) has been adapted for learning the language of finance". --Director of own business consulting firm

Another former workshop participant is

"using SALT but not in a traditional teaching mode--although teacher training is something I will be doing ... I am presently a consultant ... where I'm combining my ideas and knowledge of film/video and learning--we are developing educational tools (programs) using video disc/computer technology ... " --Independent business consultant

The complete orchestration is used by only 38% of the respondents that are (or had been) using SALT. From the commentaries of those most successful in their teaching, certain factors were found essential to their success: time to write text materials, course refinement through repetition, and attendance at additional seminars and workshops for skill improvement. Those using isolated elements from the orchestrated (SALT) method generally combined relaxation techniques, imagery, and background music as an aid in the presentation of conventional materials.

> "I was able to implement relaxation and visualization procedures with students 1-6 for reading, self-control and behavior, very successfully. I was not able to implement the total "schema" for academic areas such as multip. facts etc." --Public school educational specialist

> "I could use it (incomplete orchestration) with texts appropriate for suggestopedia. It's a tremendous task to develop the text, make charts, games, songs all by yourself. I'm still developing materials and activities." --College German teacher

In their explanatory commentaries, the respondents evaluated their workshop experiences in two ways. Most interpreted the inquiry in reference to the workshop per se; others rated their experience in relation to their practice of the SALT method since their workshop experiences. Most of the five low values for the workshop were due to the latter interpretation.

It should be borne in mind that the commentaries reflect a nine-year span of time, and that not all the workshops over the years were of the same length. Originally the workshops were 120 hours long, 5-6 weeks in summer, 3-4 hours a day. Then they were cut down to 80 hours spread over 5-6 weeks in the summer.

Then it was cut to its current 40-hour format to see if teachers could be reached more effectively in a solid week of SALT training. This varying time factor influenced the practice of the SALT method, its applications, the subjective evaluations of the workshops and the suggestions for improvements in the workshops.

The gist of the comments for the improvements of the workshop focused on the needs of the participants in acquiring the skills and materials for successful execution of the SALT method. Although only 53% of all the respondents made suggestions for improvement, the two most frequent requests were for practice sessions and for demonstrations of the SALT method with non-language subjects.

Conclusion

The follow-up questionnaire to the participants in the SALT teacher training workshop from 1976-1984 at Iowa State University furnished data giving the total number of former trainees (171) and the geographical areas from which they came (34 states, 10 foreign countries). This information indicates the potential influence thes workshops have made toward the introduction and understanding of a suggestopedic (SALT) method to the learning process.

The questionnaires revealed a wide spectrum of educational professionals in academic and business fields that are using or have used the experiences gained in the workshops. From the commentaries of the respondents, only thirty-eight percent of the teachers are currently using or have used the complete orchestration of the SALT method. Other users combine the separate elements of relaxation, imagery, and background music in their learning environments. With a few exceptions, the former participants of the workshops evaluated their experiences with gratification for the basic introduction to suggestology and with satisfaction for the presentations enabling them to use suggestopedic methods in their teaching.

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Une Evaluation d'Etude SALT et de Cours d'Entrainement pour l'Enseignant a l'Universite de l'etat d'Iowa

Nous avons surveille des personnes qui avaient assiste a un cour d'entrainement d'enseignant SALT a l'universite de l'etat d'Iowa entre 1976 et 1984 inclusivement. Nous avons demandez a propos d'experience aquis dans l'enseignement, l'utilization des composant d'enseignement, la valeur des cours avec possibilite d'amelioration. Nous avons envoye par la poste 171 questionnaires a deux occasions, nous avons obtenu un taux de 70% de retour des gens que nous avions atteint. La majorite des ancien participants avaient des choses tout a fait positives a nous dire au aujet des cours. Deux nombreuses demande qu'ils ont mentionne pour ameliore les cours etaitent des sessions de pratiques et de demonstrations de sujet typique universitaire.

Umfragenauswertung von SALT Lehrerausbildungsseminaren an der Iowa State University, 1976-1984

Wir machten eine Umfrage von Leuten, die ein SALT Lehrerausbildungsseminar an der Iowa State University zwischen 1976 und 1984 besuch hatten. Wir befragten sie über ihre Lehrerfahrungen, ihre Verwendung von SALT-Komponenten in ihrem Unterricht, ihre Bewertung des Seminars und mögliche Verbesserungsvorschläge. Wir schickten 171 Fragebogen in zwei Wellen aus, und erzielten eine Rücksenderate von 70% der Leute, die wir erreichten. Der Grosstell der ehemaligen Teilnehmer hatte weitgehend positive Kommentare zu den Seminaren

Die zwei Hauptverbesserungspunkte, die geäussert wurden, waren Wünsche nach Praktikumsstunden und Vorführungen von nicht-sprachlichen Fächern.

Evaluacion Estadistica de los Seminarios para Entrenamiento Docente SALT en la Universidad del Estado de Iowa 1976-1984

Examinamos la lista de personas que asistieron a Seminarios de Entrenamiento Docente en la Universidad del Estado de Iowa entre 1976 y 1984 inclusive. Averiguamos antecedentes docentes, uso de componentes-SALT en su enseñanza, valor del Seminario y posible mejoramiento. Enviamos 171 cuestionarios en dos partidas y obtuvimos un 70% de respuestas de la gente contactada. La mayoria de los primeros participantes tenian cosas muy positivas que decir acerca de los seminarios. Los dos pedidos mas frecuentes para mejorarlo fueron sesiones de practica y demostraciones no verbales.

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SALT in South Africa: Needs and Parameters*

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Abstract. The article highlights some of the most pressing educational and language communication needs in the Republic of South Africa and emphasizes the urgency for accelerated programs for teaching and learning. It further outlines and explains specific initiatives that have been undertaken in response to the needs described, and it suggests an approach for the possible wider application of SALT in South Africa.

* * *

The Educational Needs

In 1980 the population of the Republic of South Africa totalled 28.6 million. The major languages spoken by the almost 30 million people are Afrikaans, Arabic, Dutch, English, French, German, North Sotho, Portuguese, South Sotho, Telegu, Tsonga, Tswana, Urdu, Venda, Xhosa and Zulu. There is a growing realization of the desperate need for accelerated intercultural communication and understanding, especially between Black and White. For example many white primary schools are now introducing an African language. Such understanding is an essential prerequisite for harmonious development towards a healthier society in South Africa.

The importance of effective language communication in industry in the RSA was recently emphasized in the Main Report of the Human Sciences Research Council Investigation into Education (HSRC 1981). T.C. Jupp (1975:147) comments, "Industrial training should include language teaching as an essential component." No appointments at senior levels, no promotion, no effective negotiation is possible without efficient language communication skills.

Additional considerations reveal the next set of needs. Swart (1981,p.46) points out that by the turn of the century only 7% of the new recruits into the labor market will be Whites. The country will therefore rely more and more upon trained and trainable Black employees to fill situations traditionally occupied by Whites.

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*Editorial Comment: We present these four articles from scholars in the Republic of South Africa because of their value and the high interest in language teaching in South Africa, where the needs for improvement are very great and pressing. In view of the political, cultural and social situation, these scholars are to be commended for their willingness to take positive action to ameliorate the situation.

If we further consider that probably more than 90% of the Whites in the formal economy are not capable of communicating effectively in an African language and that 58.12% of the 4.8 million Blacks in 1982 employed in all sectors of the formal economy had 5 or fewer years of schooling and were functionally illiterate according to the definition of the Institute for Futures Research, we get some perspective on the enormous need for the following: literacy training, upgrading of communication skills in Afrikaans and English (i.e. the two official languages in the RSA) for Blacks in industry, developing courses in African languages for Whites. Tables 1 and 2 illustrate some of the country's most serious inequalities and needs in education.

Table 1

Current and projected numbers of Black school children and their teachers, 1980 and 2000.

	1980	*2000 (projected)*
Black school children	4.8 million	9.1 million
Teacher population		
Blacks	102.000	450.000*
Whites	51.000	41.000
Pupil-teacher ratio		
Blacks	1:45	1:20*
Whites	1:20	1:20

*This table is not a projection, but it is normative in the sense that it indicates the number of teachers needed for a ratio of one teacher to twenty pupils which would equal the 1980 ratio for Whites.

Two disturbing conclusions can be drawn from Tables 1 and 2: An enormous backlog in teacher training and in-service training exists in the education for Blacks. If the ratio of one teacher to twenty pupils is considered as ideal, the backlog in 1980 amounted to 138,000 teachers. In 1978 more than 80% of all the teachers in Black schools had not even completed their high school education. It is also estimated that the number of Black school children will increase by 4.3 million or 90% from 1980 to 2000. Thus, with equal educational standards in view, 17,400 teachers for Black education will have to be trained every year up to 2000, starting in 1980. However in 1982, only about 8000 teachers were trained!

Table 2

Qualifications of teachers in 1978

	White	Black
Without teachers' diploma		
Degree/level	34.33%	2.45%
Grade 12	65.67%	15.09%
Grade 10		62.90%
Grade 8		18.56%
Total	100%	100%
With teachers' diploma		
Degree/level	32.18%	1.43%
Grade 12	67.82%	13.90%
Grade 10		84.67%
Grade 8		
Total	100%	100%

Over and above these alarming facts, all these Black teachers apart from those solely responsible for the first few grades, are expected to teach through the medium of one of the two official languages: Afrikaans and English (mostly English). That means they have to communicate through a language which is a foreign language to most of them and for which most have not been suitably prepared.

It therefore becomes clear that there is a great need for an acceleration of existing training and in-service training programs for Blacks and for strong emphasis on the requirement of communication skills in the official language that the teachers need as a medium of instruction.

The Search for Unconventional Solutions

H.G. Wells is known to have commented: Human history becomes more and more a race between education and catastrophe. There is indeed a chilling relevance of this remark to the South African situation for, and we are in a race with catastrophe.

The reason motivating South African educators to look at methods and technologies which can improve the quality of teaching and learning and at the same time accelerate the process, should be evident by now. It should also be clear that educators in the RSA are desperately in need of solutions to problems that otherwise could create a catastrophe.

Hypotheses About SALT and CALI

In discussing the possibilities for meeting some of the needs outlined above, we, i.e. staff members of or associated with the Institute for Language Teaching, University of Stellenbosch, naturally considered applications of suggestopedia/SALT.

In doing so, we hypothesized that the quality and accelerative effect of suggestopedia/SALT, where it could be utilized in training centers, would benefit by integrating some attributes of computer-assisted language instruction (CALI), such as the following: individualized instruction, pretesting of students/trainees to determine the necessity for certain assignments, immediate feedback, effective learning management of large student/trainee audiences, facilities for research on the effectiveness of testing and teaching.

We further hypothesized that the computer could also become more effective as an instructional tool if one constantly considered suggestopedic principles and utilized (Hofstetter, 1982) to a greater extent the possibilities offered by neurolinguistic programming, guided fantasies, supported by Ericksonian techniques, concerts, SALT-related games and activities. In doing so, the computer or microcomputer could become an even more effective instrument for teaching trainees and students in a country such as South Africa with its acute shortage of skilled and qualified people.

Because of skepticism and resistance well-known in suggestopedic circles, we decided on a pragmatic approach. We would look for opportunities to convince educationists, decision makers, and ourselves that suggestopedia not only works, but that it can work in South Africa in a very anti-suggestopedic environment. We would also regard such opportunities as pilot projects that could indicate further possibilities for implementation as well as problems or weaknesses that need attention and areas or that deserve further emphasis or research.

The Stellenbosch SALT Program

In cooperation and with the support of academics representing five Black universities in South Africa, the plans for a pragmatic SALT program gained momentum. Three staff members attended a workshop in Ames, Iowa, in 1983, and fourteen lecturers from South African Airways were trained for three weeks in SALT methods at Stellenbosch in 1984.

The Stellenbosch program, which started in the beginning of 1984, consists of the following coherent components, some of which are being discussed in greater detail by other authors in this issue with specific reference to problems resulting from starting SALT in an anti-suggestopedic environment.

1. There was an analysis of available reports on projects and experiments with suggestopedia in language teaching.

2. There was also an analysis of suggestopedia from the perspective of established disciplines like neurolinguistics, neurology, psycholinguistics and educational psychology, as well as an analysis of the practical application of SALT in the German Department, University of Stellenbosch, for two experimental beginners groups.

3. A SALT course in Xhosa for beginners was offered in the Department of Bantu languages, University of Stellenbosch.

4. A SALT course in German for beginners was offered in the Department of German.

5. A SALT working or brainstorming group meets regularly for psychological and academic support.

6. A project was conducted for South African Airways with SALT and CALI components.

7. A researcher has launched a dissertation in which the principles and techniques of suggestopedia are being discussed and evaluated from the viewpoint of well-established disciplines like educational psychology, psycholinguistics, etc., and in which the author has carefully documented the development of various local experiments with suggestopedia.

8. We have a grant from the Human Sciences Research Council to make an analysis of the many reports dealing with experiments in suggestopedic language teaching. The claim of superior results for suggestopedic language teaching can indeed be taken seriously.

9. At the University of Fort Hare a successful beginners' course in Xhosa for non-Xhosa speaking staff members has been offered.

10. A group of lecturers and teachers of the Academy for Tertiary Education of the Department of National Education as well as members of the private sector in Namibia were trained in an intensive course in applying Lozanov's principles and techniques in language teaching. This training led to a very positive report regarding the implementation of suggestopedia in Namibia.

11. A short in-service course for Black primary school teachers was successfully presented at Stellenbosch University. The course aimed at improving specific communicative skills in English.

12. The method has also been used in the development and successful presentation of a remedial Afrikaans course for English speaking college students.

13. A lecturer at another teacher training college began with a study for a Master's degree aiming at optimizing suggestopedia for the teaching of Xhosa in the primary schools of the Cape Education Department.

14. Two issues of *INTUS NEWS*, the journal of the Institute for Language Teaching, were devoted to suggestopedia, with contributions from academics in many countries.

15. INTUS (Univ. of Stellenbosch) got the contract to write 26 scripts for a basic English course for Black viewers of South African TV based on the suggestopedic approach.

16. Academics of Stellenbosch University are involved in a series of seminars for education departments, teacher training colleges, and others.

Conclusion

Although we see positive indications as reported in the other articles in this issue on SALT activities in South Africa that SALT/suggestopedia could be useful in improving the quality of education in the RSA as well as in accelerating teaching and training, it is clear that a very careful pragmatic approach is needed. We should strive, in cooperation with the international SALT community, to build a strong team. In doing so, we can create the scientific foundation without which, we believe, suggestopedia/SALT will have little lasting effect, whether in the Republic of South Africa or elsewhere.

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SALT en Afrique du Sud: Besoins et parametres.

L'article souligne quelques grands besoins urgent d'education et de communication des langues dans le Republique de l'Afrique du Sud. il insiste sur l'urgence des programmes accelere pour l'enseignement et l'erudition. Il souligne et explique davantage des initiatives precis qui ont ete poursuivi en reponse au besoins decrit, et il suggere une plus grande approche d'application SALT en Afrique du Sud.

SALT in Südafrika: Bedürfnisse und Parameter.

Der Artikel belichtet einige der dringensten Bedürfnisse im Erziehungs und Sprachkommunikationswesen in der Republik Südafrika, und betont die Dringlichkeit von beschleunigenden Programmen für das Lehren und Lernen. Der Artikel umreisst und erklärt weiters spezielle Initiativen, die unternommen wurden als Reaktion zu den beschriebenen Bedürfnissen, und schlägt einen Weg für die mögliche weitere Anwendung von SALT in Südafrika vor.

SALT en SudAfrica: Necesidades y parametros.

El articulo destaca algunos de las mas apremiantes necesidades educacionales y de comunicacion en la Republica de Sud Africa y hace hincapie en la urgencia de programas acelerados para la enseñanza y el aprendizaje. Destaca y explica las iniciativas especificas que se han tomado en respuesta a las necesidades descriptas y sugiere un acercamiento para una aplicacion mas amplia de SALT en Sud Africa.

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SALT in Practice: A Report on Progress

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Abstract. This article reports on the use of SALT/suggestopedia for the teaching of beginning German to students at the University of Stellenbosch in South Africa. Two experimental groups and a control group are involved to determine whether SALT is viable in South African conditions and whether it really accelerates the learning of a foreign language. This study is approached pragmatically and on a relatively small scale to ensure a sound basis for research. A number of challenges have been encountered, of which the most important are the rigid system at a university and the difficulty of producing convincing, quantitative results. Qualitatively the students in the experimental group show an early competence and spontaneity not experienced before. The most promising aspect is the fact that the teachers of the experimental groups are convinced that suggestopedia offers and satisfies both students and themselves much more than any conventional method.

* * *

In this article the focus will be on the practical application of SALT in teaching German at the University of Stellenbosch with special reference to inhibiting factors and challenges. At Stellenbosch SALT is being applied in typical South African university conditions. The research is being conducted in a 'realistic' situation with no special laboratory conditions or long, uninterrupted sessions as has frequently been the case in more ideal situations.

The German Project

There are three groups of students involved, two experimental and one control, learning beginning German. The objectives of the research are:

1. to determine as far as possible whether and to what extent SALT is applicable to and viable in South African conditions;
2. to compare the groups in relation to their progress, attitude towards German, motivation, and other factors;
3. to evaluate the whole exercise, quantitatively as well as qualitatively, through biographical and attitudinal questionnaires, psychometric tests and objective language proficiency testing, the format of which has been decided on after consultation with language testing specialists;
4. to determine the inhibiting factors and possibilities for further applications in view of communicative needs in Southern Africa.

Approach

The implementation of SALT/suggestopedia could be attempted in an ideological way in that the method could be accepted as an ideal solution for major educational problems. One could thus be tempted to implement the system speedily on a very large scale. But from the study of literature, from observations and from our own limited experience, we believe that the approach should be careful and pragmatic as in a pilot project. By implementing SALT/suggestopedia on a small scale we can learn, adapt, analyze, and improve more easily as we gain experience.

Coordinated scientific support and justification must always be sought from other disciplines and groups. This will also pave the way for credibility of the program and for wider acceptance in academic and educational circles.

Inhibiting Factors and Challenges

A number of difficulties has been encountered so far. We have sought to be as pragmatic and innovative as possible in a fairly rigid and inflexible educational and anti-suggestopedic situation, e.g. adapting the SALT sequence to fit the rigid timetable of six forty-minute lectures per week.

There has also been considerable student fluctuation at the beginning of the year because of uncertainty about courses.

Unfortunately, delays in psychometric testing have resulted from interruptions and fluctuation at the beginning of the year. Because of these delays, the students displayed definite reluctance to cooperate and only 51 % of them completed all three psychometric tests. Due to a compulsory test series in the second term, the students are not only concerned about the testing in the SALT classes, but they are tempted to skip classes (even SALT classes) to study for tests in other subjects.

It was difficult to find and equip suitable environments for the SALT classes. Some effort was required to convince the university authorities that the demands of the SALT team were not absurd, e.g. painting doors and doorframes yellow when they have stores filled with white paint for the purpose.

We have not yet produced scientifically defendable statements based on quantitative results. With only one year, a limited experiment and many adverse factors and variables, it would be impossible to convince all sceptics of the value of the methodology.

Finding or creating suitable texts has also been a problem.

It is necessary to coordinate research, support from academics from other disciplines and teamwork. This is essential if this task is to be of greater educational significance than academic or commercial interest.

The training of teachers is a particularly complex and challenging task demanding high quality people as well as high quality training programs. An insufficiently trained doctor using unfamiliar and complex techniques can cause a patient's death. Similarly, an ill-prepared SALT teacher can cause disaster, e.g., unrealistic expectations of accelerated progress and high-level proficiency, which can lead to failure, distrust and the rejection of SALT. The training of SALT teachers should also be backed up by coordinated and concentrated academic and psychological support as an ongoing process, especially by experts in the fields of educational psychology, applied linguistics, neurology, and psychotherapy.

Encouraging Indications

In spite of the inhibiting factors mentioned, the challenges are being met. The students in the experimental groups taught according to the SALT method are extremely positive about their work. They enjoy their classes, speak German with enthusiasm, and are quite uninhibited. The instructors create a very special and suggestive atmosphere conducive to learning and seem to enjoy the classes just as much as the students in spite of all their hard work. The instructors also find that their students already display a superior passive and active knowledge of the language in comparison to the control group and students of previous years.

We hope to keep the reader informed about the outcome of this particular project.

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SALT en Pratique: Un Rapport de Progres

Cet article rapporte l'utilization de SALT/Suggestopedia pour l'enseignement debut Allemand aux etudiants de l'Universite de Stellenbosch en Afrique du Sud. Deux groupes experimentals et un groupe contrôle onts participer pour determiner si SALT etait viable sous les conditions Sud-Africaine et si çela pourrait accelere l'erudition d'une langue etrangere. Cette etude a ete approche pragmatiquement et relativement a petites etapes pour assurer une base solide pour faire des recherches. Un nombre de defi ont ete rencontrer, le plus important etaient le systeme rigide a l'universite, et les difficultes de produire des resultats convainquaient et qualitatif. Qualitativement les etudiants du groupe experimental ont montre une competence hative et une spontaneite jamais vu auparavant. L'aspect le plus prometteur etait le fait que les professeurs des groupes experimentals etaient convaincu que Suggestopedia offraient et satisfaisafient les etudiants et eux-memes beaucoup plus que toutes autres methodes conventionnels.

SALT in der Praxis: Ein Bericht über die Entwicklung.

Dieser Artikel berichtet über die Anwendung von SALT/Suggestopädie im Deutsch für Anfanger Unterricht für Studenten an der Universität von Stellenbosch in Südafrika. Zwei Experimentgruppen und eine

Kontrollgruppe waren daran beteiligt herauszufinden, ob SALT in südafrikanischen Verhaltnissen anwendbar sei, und ob es wirklich den Erwerb einer Fremdsprache beschleunigen könne. Diese Studie wurde pragmatisch und in einem relativ kleinen Rahmen durchgeführt, um eine gediegene Basis für die Forschung zu gewährleisten. Es stellten sich eine Anzahl von Problemen, deren wichtigste das starre System einer Universität und die Schwierigkeit, überzeugende, quantitative Ergebnisse zu erbringen, waren. Qualitätsmässig zeigten die Studenten in den Experimentsgruppen frühe Kompetenz und Spontanität, was früher nicht beobachtet worden war. Der vielversprechendste Aspekt war die Tatsache, das die Lehrer der Experimentgruppen davon überzeugt waren, dass Suggestopädie viel mehr als jede konventionelle Methode verspricht und sowohl die Schüler als auch sie selbst zufriedenstellt.

SALT en la practica: Informe de Evolution.

Este articulo informa el uso de SALT/Sugestopedia, en la enseñanza de Aleman Basico a los estudiantes de la Universidad de Stellenbosch en SudAfrica. Dos grupos experimentales y uno de control fueron comprometidos para determinar si SALT era viable en las condiciones sudafricanas y si podia realmente acelerar el aprendizaje de un idioma extranjero. Este estudio fue orientado pragmaticamente y una pequeña escala para asegurar solidas bases de investigacion. Hubo varios desafios, entre los mas importantes el rigido sistema de la Universidad y la dificultad de producir resultados convincentes y cuantitativos. Cualitativamente, los estudiantes del grupo experimental demostraron competencia y espontaneidad temprana, no experimentada anteriormente. El aspecto mas promisorio fue el hecho que los maestros del grupo experimental estaban convencidos que la Sugestopedia ofrecia y satisfacia tanto a los estudiantes como a ellos mismos, mucho mas que cualquier otro metodo convencional.

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Music and the Teaching of Xhosa, An African Tone Language

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Abstract. It is well known that, within the broad theory of suggestopedia, music is used in a specific manner so as to facilitate long-term memory. In this article attention is drawn to the use of music in the teaching of a tone language where variations in pitch levels within words may give rise to variations in meaning. The question is posed whether music, while enhancing reception and long-term memory may, at the same time, not be distorting the natural and even essential suprasegmental qualities of these languages, which may be necessary for correct reception and semantic interpretation.

* * *

The application of SALT principles in the formal teaching of Xhosa at the University of Stellenbosch is, to the best of our knowledge, the first attempt of its kind at the teaching of African languages in Southern Africa. Apart from the obvious merits of SALT principles in general and apart from successes already obtained in Xhosa classes, we would like to focus on a problem of fundamental nature which may have implications for the teaching of tone languages.

The problem in general centers upon the actual purpose and use of what is called Concert One in the traditional suggestopedic teaching/learning cycle. It is well known and appreciated that the use of music in the concert sessions forms an integral part of the learning process. Music clearly has the function of activating the right hemisphere of the brain and, conversely, relaxing the left hemisphere, thereby facilitating reception of a specific linguistic message. Furthermore, there is ample evidence in literature that the retention and recall rate for material acquired in this manner is considerably better than for that acquired under other circumstances (Racle, 1979:145). According to Schmid (1982:5) the specific purposes of the first concert are:

1. to familiarize listeners with pronunciation rules,
2. to help them savor the sounds of the language of words,
3. to direct the language to the students' inner microphone for better retention and recall.

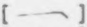
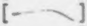
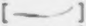
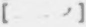
In order to achieve these purposes the teacher delivers the new material "in a specially intoned, dramatic function guided by the music (tempo, dynamics, color, phrasing) integrating him/herself as a special instrument with the other musical voices. The diction should be pure and distinct, every word coming out clear-cut and well-moulded"

(Schmid, 1982, p. 23; Racle, 1979, p. 139). The basic idea, thus, is that the voice of the teacher should move with the music, i.e. be varied in pitch, loudness, tempo and stretched or shortened.

It is general knowledge that linguistic messages consist of at least two components--a semantic and a phonetic one. Whereas there may be languages where the phonetic component may be of some lesser importance, i.e. the semantic message may be conceived through minimum phonetic detail, most languages place a high premium on phonetic detail. It is therefore appropriate that Schmid (1982) rates the goal "to familiarize listeners with pronunciation rules" quite highly. However, traditional phonetic approaches have in the past unjustly tended to separate (very often for "practical" reasons) segmental and suprasegmental qualities in the speech signal. While it may be of prime importance to pronounce a string of phonetic segments correctly so as to convey a specific linguistic message, it is equally important to acquire the correct intonation pattern as soon as possible as this is part and parcel of the linguistic message. Consider the following examples from Xhosa, where the sentences not only contain "erotic" segments, such as aspirated lateral clicks (orthographically represented by xh) which need to be pronounced correctly, but also significant suprasegmental tonal patterns. A high tone is represented by ´, a low tone by `, and a falling (glide) tone by ^.

úm̀Xhósà úbónà íthàngà = The Xhosa sees a pumpkin
úm̀Xhósà úbónà íthàngá = The Xhosa sees a thigh
úm̀Xhósà úbónà íthâŋgà = The Xhosa sees an outpost

When looking at the way in which linguistic messages are conveyed in Xhosa, one becomes aware of the structured interplay between segmental and suprasegmental phenomena. Xhosa, as a tone language like most of the Bantu languages, utilizes not only basic intonation contours (as for example English where a final rise in the contour may indicate a question and a final drop a statement), but also makes use of distinctive variations in pitch levels. Length phenomena also play a significant role. Consider the following examples:

usaphila	[úsáphì:là]	[]	"He is (living) well."	S
usaphila	[ùsáphì:là]	[]	"You are (living) well."	S
usaphila	[úsáphì:là]	[]	"Is he living well ?"	Q
usaphila	[ùsáphì:là]	[]	"Are you (living) well?	Q

S = statement, and Q = question

Thus, on the one hand music is being used in a specific manner so as to enhance reception and long-term memory, but it may at the same time be distorting the natural and even essential suprasegmental qualities of the language, which may be necessary for correct reception. When we say that we are using Concert One "to familiarize listeners with pronunciation rules" and that during the actual presentation we endeavor "to articulate every word clear-cut and phonetically well-moulded", we are in fact only addressing a part of the issue - in any case as far as tone languages are concerned. Furthermore, due to the phonetic structure of Xhosa and due to the fact that the organs of speech are tensed during articulation, this language is relatively "loud" in nature as are most of the other Bantu languages. Presentations of Xhosa material in a subdued tone and with predominantly soft music may also do injustice to this idiosyncrasy of the language. It seems to be quite clear that some kind of trade-off is necessary; however, it is not yet known what the nature of this trade-off should be. Well defined experimental phonetic investigations could perhaps shed some light on this issue.

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La Musique et lEnseignement de Xhosa Une Langue a Ton Africaine

Il est bien reconnu qu'a l'interieur de la vaste theorie de suggestopedia, la musique est employe d'une façon precise pour facilite la memoire a long-terme. Dans cet article l'attention est tire vers l'utilization de la musique dans l'enseignement de la langue a ton ou les variation de l'hauteur du ton exprimer en mots, peuvent produire des variances en signification. La question que est pose est que si la musique, qui permet de mettre en valeur la reception et la memoire a long-terme pêut en meme temps ne pas deformer les qualitees naturelles et meme holistic essentielle de ces languges, qui peuvent être necessaire pour une reception precise et une interpretation semantique.

Musik und das Lehren von Xhosa, einer afrikanischen Lautsprache.

Es ist wohlbekannt, dass im Rahmen der Theorie der Suggestopädie Musik auf eine spezielle Art verwendet wird, um das Langzeitgedächtnis zu fördern. In diesem Artikel wird die Aufmerksamkeit auf den Gebrauch der Musik im Unterricht einer Lautsprache gelenkt, wo eine Änderung der Tonhöhe im selben Wort eine Änderung des Wortsinnes nach sich ziehen kann. Es wird die Frage gestellt, ob nicht Musik, obwohl sie die Aufnahme und das Langzeitgedächtnis steigert, zugleich die natürlichen und sogar wesentlichen übersegmentären Qualitäten dieser Sprachen, welche für die korrekte Aufnahme und semantische Interpretation notwendig sind, entstellen könnte.

La musica y la enseñanza de Xhosa, una lengua africana tonal.

Es bien sabido que, dentro de la amplia teoria de la Sugestopedia, la musica se usa de una manera especifica a fin de facilitar la memoria de larga duracion. En este articulo la atencion esta puesta en el uso de la musica en la enseñanza de una lengua tonal donde las variaciones del tono de voz dentro de las palabras pueden dar lugar a

cambios de significado. La pregunta plantea si la musica, aun cuando aumenta la receptividad y la memoria de larga duracion podria, al mismo tiempo, distorsionar la naturaleza y aun las cualidades esenciales suprasegmentales de estas lenguas, que serian necesarias para la correcta recepcion e interpretacion semantica.

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Suggestopedic Texts for Foreign Language Teaching: Some Literary and Didactic Considerations

Rainer Kussler and Ruth Pauw-Bodenstein

Abstract. In this article the basic principles of Lozanov's suggestopedia are interpreted in terms of Watzlawick et al. (1980) as an orchestrated attempt to further "analogic" communication. Many suggestopedic texts are, however, based on concepts of language and language didactics which do not facilitate analogic communication. The article examines some fundamental literary and didactic criteria which should be applied to a text so that it lends itself to analogic communication, i.e., proper suggestopedic presentation and activation, and at the same time conforms to present day standards of language didactics.

Basic Considerations

Suggestopedia, as we interpret it, is basically an attempt at perfecting communication in the teaching process. We can best explain this by referring briefly to some of the premises of the model of human communication of Watzlawick et al. (1978 & 1980). We choose Watzlawick's model partially because he is an European working in the United States; and we believe that a combination of American pragmatics and European theory could greatly enhance Suggestopedia. Both Watzlawick and Lozanov began as psychiatrists, which gives them a common scientific basis.

Watzlawick's central premise is that one cannot not communicate. Whenever there are two persons who are both able to function normally as sender as well as recipient, it is impossible for either of them to behave in any way which does not convey something to the other. Consequently, all behavior is communicative. Watzlawick postulates this point because communication always takes place on two levels at the same time. The first of these levels he calls digital communication; on this level, information is transferred via language digits with fixed meanings. The second level he calls analogic communication; and, on this level, information on how to understand the digital information is transferred. Here, the volume and tone of voice, facial expression, body language of a sender as well as aspects of the situation and environment in which the communication takes place serve as indicators as to how a verbal message is to be interpreted by the recipient. For example, one cannot understand a spoken sentence like "I really enjoy this!" as an ironic statement without drawing on this analogic mode of communication. Contrast Watzlawick's terminology with the less precise "verbal" vs. "non-verbal".

Lozanov's suggestopedia is based on the realization of the importance of non-verbal communication as well. The teacher and the teaching environment are of the utmost importance for a successful teaching process, and suggestopedia endeavors to integrate every facet of the teacher's behavior and the teaching environment into the communicative process which takes place in the classroom. All aspects of suggestopedia--from background music to relaxation exercises and guided imagery--can be understood as facets of an orchestrated attempt to further analogic communication.

It is in this respect that suggestopedia differs from traditional methods of teaching which tend to stress the digital mode of communication. In other words, suggestopedia differs from conventional methods not so much in what is communicated but in how this is done. Consequently, the phenomenal success which is claimed and can be achieved through suggestopedia must, in our view, primarily be ascribed to optimized classroom communication.

According to our personal experiences as learners and teachers in suggestopedic language courses and trainees in suggestopedic teacher training workshops, there can be no doubt as to the highly positive effects of suggestopedic techniques on the general classroom atmosphere and the attitudes of the learners towards each other, the teacher, and the subject matter. For us it has been and continues to be a pleasure to learn and teach within a suggestopedic environment. Therefore, we do not question how subject matter is taught through suggestopedia. What we do question, though, is the quality of what is taught, of the subject matter itself, the suggestopedic text.

Let us consider briefly the role of the text. All language courses make use of texts. A foreign language course normally starts off with secondary or didactic texts, i.e. material which has been specifically written for the course, and the student will then gradually proceed to primary or authentic texts. There are, however, courses which use either mode of text throughout. So do suggestopedic language courses, which are based on a secondary text in the form of a drama script. This text is mainly used for the introduction and presentation of the language material to be mastered by the students, but it also serves as a starting point for the activation of this material. The presentation of the text and the activation of its language material are the two basic steps in suggestopedic language teaching. They should be performed in such a way as to make the best possible use of positive suggestion or, in Watzlawick's terminology, of the analogic mode of communication. It stands to reason that the text *per se* must lend itself to such a performance.

A thorough investigation of various suggestopedic texts for foreign language teaching has shown that quite a number of them are based on traditional concepts of language, grammar and language didactics, including certain types of grammar tables. We regard these grammar tables which resemble those in Latin primers as rather old-fashioned. Sometimes these concepts even seem to contradict the basis of Suggestology, that is, we find them blatantly anti-suggestive. If these concepts could be updated, it should be possible to bring the digital level of communication in suggestopedic language teaching more in line with the analogic level, which could boost the method considerably.

For the purposes of this paper we shall distinguish between the suggestopedic text and what should be done with it in the classroom. What we want to examine, are basic criteria which should be applied to a text so that it lends itself to suggestopedic presentation and activation and, at the same time, conforms to present day standards of language didactics. We shall first elaborate on the principles of suggestopedia in so far as they constitute the text and then shall consider what considerations should go into a suggestopedic text from the point of view of foreign language didactics. Thus we shall look at the suggestopedic text from two different angles: from the point of an author creating a literary text and from the point of a teacher preparing didactic material. We should like to stress that, in the actual writing of a text, these two perspectives must, of course, go hand in hand. We are separating them here for methodological reasons only.

Suggestopedic Elements of the Text

Suggestopedic courses are organized entirely around texts. This requires special texts, written by authors who not only know what subject matter is to be taught, but who are also familiar with the principles of suggestopedia. Throughout the writing of a suggestopedic text the author will have to consider the fundamental goal of suggestopedia: to generate a learning environment in which all elements are harmonized optimally to create an experience of wholeness and integrity.

This goal has two important implications for the text. The principles of suggestopedia must be incorporated into the text in a wholistic sense. They should form the internal elements of the text and should constitute and determine its plot, its message and its style. This means that the positive aims which a course sets out to achieve, both academically and psychologically, should be suggested by and articulated in the text verbally, albeit not explicitly. Thus, the suggestopedic text should enhance the general atmosphere of relaxation, happiness and lack of anxiety in class. It should help the teacher establish and maintain authority and double-plane congruency while at the same time facilitating the students' growth in self-esteem and in the realization of their own potential.

The incorporation of the text into the broader framework of classroom activities must also be done in a wholistic sense. Authors of suggestopedic texts should understand and bear in mind the special function of the text in the suggestopedic cycle. The text must specifically comply with requirements pertaining to the following areas:

1. The Concert Session

It is essential that the foreign text, which is introduced to the students via the first and second concerts, should have a literary quality which corresponds to the aesthetic and ritualistic significance of the concert session. The announcement of a concert session creates a keen anticipation among students, and this valuable potential should be utilized to full capacity. The text which is then presented, can make a deep impression in a literary sense, provided that it appeals to the students.

2. Activations

New speech-acts, structures and vocabulary are most naturally activated via the text. This has two obvious advantages:

a. The unity of classroom-procedures can be easily maintained if activities are extracted directly from this one source,

b. and, if the text appeals to the students, one can assume that they would like to be able to simulate what is taking place in the story. This can result in a high motivation to acquire the communication skills needed to master speech-acts in the target-language. SALT teachers will require from the text suitable descriptive passages to use for sensory suggestive guided phantasies.

3. Background knowledge (Landeskunde)

In South Africa little is generally known about circumstances in German-speaking countries. Because of this, we are concentrating on inter-cultural communication in both German language and literature courses at Stellenbosch. It seems appropriate to do the same in a suggestopedic language course. In fact, the atmosphere in a suggestopedic classroom and the possibilities of creative, spontaneous reaction to input seem extremely beneficial for meaningful intercultural considerations and activities.

If it is one's aim to compare a foreign culture with one's own, it follows that one has to get to know as much as possible about the foreign people and country. This consideration is important from an author's point of view. The text should contain enough information about the circumstances in the countries where the target language is spoken to facilitate substantial discussions on an inter-cultural level in class.

4. Home work

Reading the text in the evening and in the morning is the student's main explicit continuing contact with the target language outside the classroom. This pertains particularly to situations where students are not learning the language in a country where it is generally used. If this reading homework is to be suggestopedically viable, it will have to be something else than homework in the ordinary sense. It, too, will have to be fun. The text should therefore be interesting and appealing enough for the students to gain pleasure out of reading it.

Whether all these considerations can be taken into account within one single text will depend largely on the creative imagination and ingenuity of the author. We do, however, think that the theoretical considerations raised at the beginning of this article can be very helpful in establishing guidelines on how to write successful suggestopedic texts. According to the model, the text has to provide the linguistic basis, the digital substance, to be completed and complemented by the simultaneous non-verbal, analogic communication. A good text must therefore provide a good contextual basis for the great possibilities of suggestopedic activation techniques.

In the specific case of a text for a foreign language course, in our case a beginners course in German, the text must provide two essential elements. It has to facilitate identification while, at the same time, it has to remain exotic enough to maintain sufficient curiosity and interest. For our purposes, the text must therefore contain and balance both components: familiarity with phenomena (which will lead to identification) as well as a certain strangeness, a sense of the unknown (which will create interest and curiosity). We want to emphasize that both elements are equally important.

The mere fact that students have enrolled for a course in a foreign language suggests some interest for a country and people unknown to them, an interest in the exotic. This potential should be nourished and realized. The students should feel throughout the course that they are continually finding out things about another people and another country which they never realized and which are very interesting. But to be interesting, a foreign phenomenon has to strike at least some known chord in the observer to trigger real interest.

How, then, does one combine these two components? We have found that the best way to do this is by assigning the components to different structural elements in the text itself. Therefore, we sought to have the familiarity, which is to facilitate identification, carried mainly by the characters and the plot while the unfamiliar, the exotic, is featured in the milieu, the geographical and social context in which the action takes place. This constitutes a simple scheme:

IDENTIFICATION
Characters and Plot
Emphasis on Re-enactment
Students can recognize familiar elements easily
and frequently

CURIOSITY, INTEREST
Geographical and Social Milieu
Emphasis on the unfamiliar, the exotic.
Students are lead to questions, speculations,
comparisons with their own cultural context.

When writing our text, we concluded that the best blending would be a general, "universal" human situation in an unmistakably German context. An appropriate "universally human" situation seemed to be two young people of opposite sex meeting, getting to know each other, experiencing things together, becoming better and better acquainted, and falling in love. This proved a popular but dangerous plot. Popular because our students are predominantly between 18 and

19 years old and very much preoccupied with the theme of falling in love The danger is that a simple love story might alienate sophisticated readers from the text immediately and perhaps even from the course if the plot seems too banal

We should like to elaborate upon this last consideration Traditional language teaching has, in our opinion one great drawback in that the beginner's linguistic limitations are usually linked with and maybe reinforced by a corresponding limitation in the intellectual content of the study material and presentation Suggestopedia seems potentially an adequate method to escape the pitfall of insulting the intelligence of the student

Bearing this in mind one cannot simply write a romantic love story and hope that its emotional appeal alone may carry it through We have however not abandoned the love story plot for our text but have tried to embed it with enough authenticity to prevent banality and enough intellectual substance to stimulate thought and discussion The relationship between the male and female protagonists is therefore the leitmotiv but always accompanied by various other themes e g the background and interests of the characters activities alone or together and mainly the steady narrative line

Since the characters are the structural element which must primarily promote identification it follows that they have to be sincere and believable As Charles Schmid has repeatedly stated in his useful hints on text writing one should after some reading start to feel that one almost knows the characters that one would like to meet them in actual life (cf LIND 1982 Dhority 1984) In this sense they can become very attractive and effective bait for the acquisition of knowledge about the target culture and its language

However one must remember that character does not mean stereotype which is especially important from a literary point of view On no account may the didactic considerations interfere too strongly with the narrative and the psychological credibility of the story This unfortunately does happen quite easily when one actually writes the text around grammatical units or clusters of vocabulary Therefore we decided when we were planning the story in broad lines to move away from traditional grammar altogether Instead we chose a principle which seems more appropriate to suggestopedia namely linguistic progression according to genuine speech acts The list of speech acts used is that contained in Neuner et al (1979) supplemented by Baldegger et al (1980)

This framework of speech acts naturally expanded according to the flow of the story itself The result is a text with narrative continuity which takes one through a large variety of speech acts It remains an easy task for the teacher to identify the speech acts and to activate them in a suggestopedic sense according to the desired linguistic or grammatical intentions

The Communicative Structure of the Text

The general aim of our suggestopedic German course is to enable students to communicate with native speakers in everyday situations, i.e. to handle situations in which they are one of the partners in a dialogue. Consequently, the linguistic framework of a suggestopedic text through which this aim is to be realized, must be a dialectic one. Our examples illustrate this dialectic principle, and the first page of our German text as it is used in class and as the students see it appears in Table 1.

In the first place, the text must contain the speech acts which constitute the communicative skills to be mastered by the students. Here, the speech acts from the first page of our text which are to be activated after the first concert session are emphasized. In Table 2 the right hand column shows the names of these speech acts underneath their English translations.

These speech acts normally consist of a general phrase on the one hand and specific information on the other. If these specifics are taken out of the text, and the text is an adequately built dialogue, what remains is a dialectic framework which can be filled with new specifics to create new dialogues.

The following text in Table 3 illustrates this principle, the left hand column presenting the new dialogue (new specifics emphasized), the right hand column showing the original specifics.

When the students, in careful didactic progression, are led to discovery of new content, they learn the principle of communicative creativity, an aim which we regard as truly appropriate to suggestopedic language teaching and one which can be enhanced by the text itself. As with any course, the text is a crucial element, and the appreciation of suggestopedic principles in the writing of texts must be considered with care.

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Table 1

Eine Oper Für Die Tupari (An Opera for the Tupari)

Erster Akt	First Act
1. Szene	Scene 1
In einem Lufthansa-Jumbo,	In a Lufthansa-Jumbo
unterwegs von Rio de	en route from Rio de
Janeiro nach Frankfurt.	Janeiro to Frankfurt.
Durch des Fenster Sieht	Through the window
man die Sonne:	one can see the sun.
Rosa und golden steht	Rosy and golden it stands
am Horizont.	on the horizon.
(Werner von Übermut hat	(W. v. Ü has looked
lange aus dem fenster	out of the window for
geguckt. Plötzlich	a long time. Suddenly
erkennt er das Buch, das	he recognizes the book which
seine Nachbarin liest.)	his neighbor is reading.)
WERNER: Estschuldigen Sie	Excuse me
bitte, ich sehe, Sie	please, I see you
lesen Hermann Hesse!	are reading Hermann Hesse!
ROSWITHA: Ja. Ach, Sie	Yes. Oh, you
sprechen auch deutsh?	also speak German.
WERNER: Ja, Ich bin	Yes, I am
Deutscher. Aber ich lebe	German. But I am living
in Brasilien.	in Brazil.
ROSWITHA: Ach, Sie auch?	Oh, you too?
Ich wohne nämlich in	Because I live in
Belo Horizonte.	Belo Horizonte.
WERNER: Das kenne ich.	I know that place.
Dort leben viele	Many Germans are
Deutsche. Übrigens, ich	living there. By the way, my
heiße Übermut.	name is Übermut.
Werner	Werner
von Übermut.	von Übermut.
ROSWITHA: (lächelt) Übermut?	(smiles) Übermut?
Wirklich?	Really?
WERNER: Ja, ehrlich. (Er	Yes honestly. (He
lacht auch.) Und das	laughs too.) And that
stimmt auch: Ich bin oft	is quite correct. I am often
ziemlich übermütig.	rather bold.
Aber nennen Sie mich doch	But do call me
bitte Werner.	Werner, please.
ROSWITHA: Gern. Und ich	Gladly. And I
bin Roswitha. Roswitha	am Roswitha. Roswitha
Singvogel.	Singvogel.
WERNER: Wie hubsch! Trifft denn	How nice! Is your
Ihr Name auch zu?	name appropriate, too?
ROSWITHA: Ja schon. Ich singe	Well yes. I like to
sehr gern. Ich bin	sing very much. I am a
Musiklehrerin.	a music teacher.

Table 2

Eine Oper Für Die Tupari (An Opera for the Tupari)

Erster Akt 1. Szene	First Act Scene 1
WERNER: *Entschuldign Sie bitte*, ich sehe, Sie Sie lesen Hermann Hesse!	Excuse me please. INTERRUPT, START CONVERSATION
ROSWITHA: Ja. Ach, Sie	
WERNER: Ja, *ich bin Deutscher.*	Yes, I am German. STATE NATIONALITY
Aber *ich lebe in Brasilien.*	But I am living in Brazil. STATE PLACE OF RESIDENCE
ROSWITHA: Ach Sie auch? *Ich wohne nämlich in Belo Horizonte.*	Because I live in Belo Horizonte STATE PLACE OF RESIDENCE
WERNER: Das kenne ich. Dort leben viele Deutsche. Übrigens, *ich heiße Übermut.*	my name is Übermut. INTRODUCE YOURSELF
Werner von Ubermut.	
ROSWITHA: (lächelt) Übermut? Wirklich?	
WERNER: Ja, ehrlich. (Er lacht auch.) Und das stimmt auch: Ich bin oft ziemlich übermütig. Aber nennen Sie mich doch bitte Werner.	
ROSWITHA: Gern. Und *ich bin Roswitha.*	I am Roswitha. INTRODUCE YOURSELF
Roswitha Singvogel.	
WERNER: Wie hübsch! Trifft denn Ihr Name auch zu?	
ROSWITHA: Ja schon. Ich singe sehr gern. *Ich bin Musiklehrerin.*	*I am a* music teacher STATE OCCUPATION

Table 3

Entschuldigen Sie bitte, ich sehe, Sie lesen *Thomas Mann!*	Hermann Hesse!
Ja. Ach, Sie sprechen *auch?*	auch deutsch?
Ja. Ich bin *Schweizer.*	Deutscher
Ich lebe in *Australien.*	Brasilien
Ach, Sie *ebenfalls?*	auch?
Ich wohne in *Adelaide.* *Die Stadt* kenne ich.	in Belo Horizonte Das
Übrigens. Ich heiße *Sturm.* Wirklich?	Übermut
Ja, *ernsthaft.*	ehrlich
Ich bin oft *stürmisch.*	übermütig
Aber nennen Sie mich doch bitte *Adelbert.*	Werner
Gut.	Gern
Und ich bin *Heiderose.*	Roswitha
Wie *treffend!*	hübsch
Ich *wandere* sehr gern. Ich bin *Botanikerin.*	singe Musiklehrerin
Was Sie nicht sagen! Ich liebe *Blumen.*	 Musik
Und für *Thomas Mann* schwärme ich auch.	Herman Hesse

An English translation of the new text with new specifics emphasized is shown in Table 4.

Table 4

HE: Excuse me please.
I see you are reading *Thomas Mann!*
SHE: Yes.
Oh, you speak German, too?
HE: Yes, I am *Swiss*.
But I live in *Australia*.
SHE: Ah, you *also?*
I live in *Adelaide*.
HE: I know that *town*.
By the way, my name is *Storm*.
SHE: Really?
HE: Yes, *seriously*. I am often *stormy*.
But please, do call me *Adelbert*.
SHE: Gladly. And I am *Heiderose*.
HE: How *appropriate!*
SHE: I like to *wander* very much.
I am a *Botanist*.
HE: You don't say!
SHE: I love *flowers*. And I also adore *Thomas Mann*.

In a next stage, structures chosen at random from the text can be put together and filled with new specifics to form new dialogues. These new dialogues can be recorded and played back to the students who should have no difficulty at all in understanding them. This experience is a powerful suggestion regarding their learning ability and progress.

Here in Table 5 is an example of how such a completely new text might look, and most of the new words are cognates.

Table 5

IN MUSEUM

SIE: Entschuldigen Sie bitte, ich sehe, Sie interessieren sich für Picasso?
ER: Ja, ich liebe seine Kunst. Kennen Sie ihn gut?
SIE: Ja, schon. Ich bin oft in Kunstausstellungen.
ER: Wie finden Sie dieses Bild?
SIE: Ach, ich weiß nicht. Die Farben sind mir außerordentlich sympathisch. Aber ich verstehe es eigentlich gar nicht.
ER: Ich auch nicht.
SIE: Wirklich?
ER: Ja, ehrlich. Ich meine es ganz ernst. Ich schwärme für Picasso, aber dieses Bild! Ich weiß nicht recht. Übrigens, ich heiße Capone. Al Capone.
SIE: Angenehm! Und mein Name ist Sommer. Elke Sommer.
ER: Wahrhaftig! Was Sie nicht sagen!
SIE: Da staunen Sie, nicht wahr! Aber ich bin hicht DIE Elke Sommer, wissen Sie. Leider nicht.
Moment mal! Al Capone--den Namen kenne ich doch!
Ach! Was Sie nicht sagen! Al Capone! Wahrhaftig!
ER: Da staunen Sie jetzt, nicht wahr! Ich meine es aber Namen: Erich Braun. Aber ich liebe exotische Namen. Also nenne ich mich Al Capone. Ich schwärme für Gangsterhelden, wissen Sie. Nennen Sie mich doch bitte Al.
SIE: Selbstverständlich! Nichts tue ich lieber!
Phantastisch! Al Capone und Elke Sommer!...
Na, ich bin ja gespannt...

Translated into English, this text would read like Table 6.

Table 6

In a Museum

SHE: Excuse me, please. I see you are interested in Picasso?
HE: Yes, I love his art. Do you know him well?
SHE: Well, yes. I am often at art exhibitions.
HE: How do you like this painting?
SHE: Oh, I am not so sure. I like the colors very much. But I do not really understand it.
HE: Neither do I.
SHE: Really?
HE: Yes, honestly. I'm quite serious. I adore Picasso, but this painting!.. I really don't know. By the way, my name is Al Capone.
SHE: How do you do! And my name is Sommer. Elke Sommer.
HE: Honestly! You don't say!
SHE: That surprises you, doesn't it! But I am not THAT Elke Sommer, you know. Unfortunately not. Just a moment! Al Capone.
Don't I know that name? Oh! You don't say! Al Capone! Really!
HE: Now you're surprised, too, isn't it! But of course, I'm not serious. I have a very boring name. Erich Braun. But I love exotic names. So I call myself Al Capone. I am crazy about gangster heroes, you know. Please call me Al.
SHE: Of course! There's nothing that I'd rather do! Fantastic! Al Capone and Elke Sommer! Now, where is that going to lead up to...?

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Texte Suggestopedique pour lEnseignement de la Langue Etrangere Quelques Considerations Literaires et Didactiques

Dans cet article les principles de base suggestopedia de Lozanov sont interprete en termes de Watzlawick et al (1980) comme tentative orchestrer a fin de premouvoir des communications analogiques De nombreux textes suggestopediques sont de quelque façon base sur des concept de langues et de langues didactiques qui ne facillite pas les communications analogiques L article examine quelques fondamentaux literaires et criteres didactiques qui dôivent être applique au texte qui ils puissent s accorder aux communications analogiques par exemple une presentation et une activation suggestopedique et en meme temps au normes actuel de langues didactiques

Suggestopädische Texte für den Fremdsprachenunterricht Einige literarische und didaktische Überlegungen

In diesem Artikel werden die Grundprinzipien von Lozanovs Suggestopädie im Sinne von Watzlawick u a (1980) als ein orchestrierter Versuch zur Förderung analoger Kommunikation interpretiert Viele suggestopädische Texte sind jedoch basiert auf Konzepten von Sprache und Sprachdidaktik die analoge Kommunikation nicht fördern Der Artikel untersucht einige grundlegende literarische und didaktische Kriterien die angewandt werden sollten, sodass der Text sich für analoge Kommunikation eignet d h für ordnungsgemässe suggestopädische Präsentation und Aktivierung, und sich zugleich den heutigen Standards von Sprachdidaktik anpasst

Textos Sugestopedicos para la enseñanza de Idiomas Extranjeros Algunas consideraciones literarias y didacticas

En este articulo, los principios de la Sugestopedia de Lozanov son interpretados en los terminos de Lozanov et al (1980) como un intento de orquestacion hacia una mayor comunicacion analogica Muchos textos sugestopedicos estan sin embargo basados en conceptos de lengua y de didactica que no facilitan la comunicacion analogica El articulo examina alguna literatura fundamental y criterios didacticos que debieran ser aplicados a un texto para que se preste a la comunicacion analogica por ejemplo presentacion sugestopedica apropiada y activa y al mismo tiempo adecuada a los actuales niveles de la didactica de la lengua

J. of the Society for Accelerative Learning and Teaching, 1985, 10(3)

BOOK REVIEW

La Pedagogie Interactive: Au Croisement de la Psychologie Moderne et de la Pedagogie
by Gabriel Racle
Paris, France: Editions Retz, 1983
207 pp.

Reviewed by
Milla Bayuk
University of Western Florida

Gabriel Racle's book, *Interactive Pedagogy: The Interaction of Contemporary Psychology and Pedagogy*, consists of a brief three-page introduction, two main parts (98 and 102 pages respectively) and a two-page bibliography. The book is written in French, and its supporting references are mainly from European sources. The book is scholarly, well organized, and eminently readable. It is a concise study of the interaction between the following variables:

1. The structures and functions of the left and right cerebral hemispheres;
2. The limbic system and the neo-cortex, or the "hot" and "cold," computer-like, brain (as Racle terms it);
3. The learner and the "knower" (Earl Stevick's term for the one who imparts know-ledge; Stevick, 1982);
4. The learner and his socio-biological environment;
5. The learner and the world of music and art; and
6. The learner and such fields as chronobiology, the effect of colors on learning, and other fields rarely associated with traditional instruction.

Racle's work is thus of significance to a multitude of professionals as well as to those simply interested in self-improvement. Moreover, parts of the text can be used as supplementary reading in French language classes, as was tried at the University of West Florida in the fall of 1984. The first-year students of French thoroughly enjoyed selections on the psychological and physiological effects of colors, music, and circadian rhythms on learning and creativity. Not only did these students learn how to learn better, but they also advanced notably and without any visible effort, in their mastery of French.

The book's readability is enhanced by numerous illustrations, stick drawings, and charts. The author has used the multi-sensorial approach favored by the proponents of accelerated learning. Indeed, both hemispheres are activated by Racle's format with its balanced presentation of theories and facts. In addition--again in concert with the principles of optimal learning--an occasional subtle sense of humor employed by Racle in certain drawings emotizes* the reader.

that is, promotes the reader's emotional acceptance of the text.

Both Machado and Racle believe that all new information is processed in one direction only: from the limbic brain to the neo-cortex, from the "hot" to the "cold" brain, from emotion to reason. It is a one-way street, says Racle. It is the limbic brain which induces in the cortex beliefs of high intensity, regardless of their intrinsic veracity.

The principles of emotology are close to Lozanov's ideas on persuasive suggestion, except that while Lozanov advocates heterosuggestion, Racle and Machado shy away from all suggestion from an outside source. One must agree that auto-suggestion, promoted by the instructor in an unobtrusive way (music, voice, subliminal body signals, and so forth) fits better in a democratic educational setting. Still, it is difficult to draw a line between the two types of suggestions. One is simply more subtle.

The book is an excellent teaching text as well as an informative and sophisticated study of human behavior. It is written with zest and optimism. It contains theoretical insights and also provides sound teaching techniques. Its main thesis is perhaps summed up best in the chapter entitled "The Key to Interactive Pedagogy." This type of pedagogy, says Racle, is multimodal, global, relational, adaptable to changed conditions, and above all, generative. Racle reminds us that the human brain is capable of selecting, organizing, comparing, and associating incoming data, something that even the best of us often forget. Consequently, new data must be diverse and abundant to allow the brain a basis for formulating hypotheses, verifying and regrouping data, and finally, either rejecting or accepting incoming information to long-term memory banks. In other words, one must assign greater responsibility to the brain itself. The prevailing mode of instruction does not adhere to this principle, but favors unrelated meager data which the student encodes reluctantly and rejects promptly as something which "does not compute."

As for the shortcomings of the book, one could mention three minor ones. A slight but disquieting note is "heard" in "Tonalities," a one-page passage given in the Introduction. It presents a child who, forced to conform, loses his innate sense of beauty and wonder, and his ability to create. The child becomes "square inside ... smashed ... and heavy, like every one else." This page reminds one of the Orwellian theme of Big Brother and his world. Even if some of us do perceive our culture to the tune of this particular description, we could still dispense with the negative mood it creates. As Lozanov would say, the "mental set" must be peaceful and happy at the onset of new data-encoding to promote superior learning, and one has a great deal

---

*The concept of emotology is expounded by Luiz Machado in *Principles of Emotology and Emotopaedia*, Rio de Janeiro: State University of Rio de Janeiro Press, 1985.

to learn from Racle. However, Racle's compelling writing of the main chapters soon dispells the negative suggestions of "Tonalities".

The second weakness--an excess of Anglicisms--might prompt the language purist to renew his lamentations on the subject of "contamination" of the French language. On the other hand, a more pragmatic and tolerant reader who accepts and even encourages cross-cultural borrowing, would remain calm when confronted with the Anglicisms of the book. Also, the Canadian French, the language Racle uses when he is in Canada, might have already incorporated certain educational terminology borrowed from English.

Finally, a word on references. Although extensive footnotes are given throughout the book, the reader is disappointed by the paucity of bibliographical entries--which are limited to some thirty works dated from 1980 through 1983. Moreover, some of them are incomplete, and this incompleteness, combined with unfamiliar acronyms for European symposia and/or publishing houses and their locations, renders the Bibliography section rather ineffective. Ironically, one of the strengths of Racle as a writer is his familiarity with the American, French, Canadian, English, Russian, and Bulgarian research. The reader would appreciate more extensive reference data.

Despite these minor shortcomings, the book is an excellent contribution to the field of teaching and learning. It should be translated into English for the benefit of a larger American audience.

J. of the Society for Accelerative Learning and Teaching, 1985, 10(3)

BOOK REVIEW

MIND
A User's Manual

by Locky and Don Schuster
Ames IA: Research into Mind
113 pp

Reviewed by
Otto Altorfer

A psychologist-artist team presents four decades of insights about the Human Mind. It makes a lot of sense when they say that most people have learned to control their bodies, although most of them operate them less efficiently than their cars, but that people do not feel in control of their minds.

A prerequisite of mind-mastery is a good understanding of how the mind operates. This manual offers many aspects of mind operation in easily readable and entertaining ways. The manual emanates confidence and happiness, not fear, around the education of the mind.

It starts with the basics: the operation of the conscious, the subconscious and the superconscious mind, then offers first options how to calm the conscious mind, how to get the "monkey-mind" to sleep, and free from stress hormones.

These preliminaries must be mastered in order to experience the "Tone Scale," gauge and procedure to detect early programming around problem solving, going along with people and other behavior patterns. The Tone Scale covers an emotional dimension of goals, so to speak, and, coupled with the chapter "Living with an Optimum Mind," its intellectual counterpart, present a wide range of benefits of mind training. A partial list of them are:

- freedom from being attached to early, or not so early experiences of pain and hurt,
- freedom from the compulsion of playing artificial roles,
- freedom from attitudes or habits of attack or complaints, and
- ultimately, a mind which is fully in charge and able to yield to those laws and principles which hold human beings and the universe in balance for the good of all life.

The authors are offering an abundance of processes and procedures to get the readers "there." Case studies and illustrations demonstrate how the mind is often used minimally, or counter to a person's best interest, causing suffering and misery. Yet, misery doesn't create a better world, nor does suffering guarantee a place in heaven to an individual. The causes for a person's mishap for abdicating the power of his or her mind are mainly seen in negative-restrictive thoughts and early "misconditioning," many of which are described with a great sense of reality. At the same time they offer a wealth of down-to-earth processes for earning the blessings of an optimally functioning mind.

This exciting booklet answers a whole bunch of questions (some people always wanted to know, but were too confused to ask) around the theme: How can I really be in control of my life?

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THE JOURNAL OF THE SOCIETY FOR ACCELERATIVE LEARNING AND TEACHING

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The Editor welcomes submission of manuscripts on an interdisciplinary nature relevant to all aspects of suggestive learning-teaching-therapy counseling within the theoretical and procedural confines of Suggestology and/or Suggestopedia. The JOURNAL FOR THE SOCIETY OF ACCELERATIVE LEARNING AND TEACHING will publish a wide variety of articles - including critical reviews, theoretical analyses, speculative papers, case studies, quasi-experimental studies, as well as reports of empirical research (basic or applied) of major significance. The basic focus is Suggestopedia theory , research and application.

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Mobilizing "Reserve Energy" at Work: A Composite of Common Learning Elements

Otto Altorfer

Abstract. This paper describes the results of our research about attaining higher performance through accessing hidden potentials in people at work, and about the teachability of such topics in industry training. It presents: learning elements aiming at "traditional" goals and at goals referred to as super-, peak, high level performance, success motivation, the pursuit of excellence, etc.; learning elements which are predominant and common in modalities focusing at "higher performance;" a composite of twelve common learning elements for easy evaluation and comparison of modalities, as well as for selecting learning elements qualifying for industry use; and an example of such evaluative analysis applied to "Suggestology," the modality which spurred our interest of mobilizing "reserve energy" in an industrial setting.

* * *

Introduction

Hidden Potential or Reserve Energy

The claim to accelerate learning ten to twenty times by the Suggestology or SuperLearning folks prompted our interest to go for a thorough investigation of such claim and its possible application in industry. The proofs were compelling: learning can indeed be substantially accelerated, many people use only a small (4-7 percent) fraction of their energy, almost unlimited reserve energies are available in everyone.

Our conclusion: When learning can be accelerated, and learning is a human function, human functioning can be accelerated. For industry, accelerated *functioning* definitely offered a greater attraction than accelerated learning. If human functioning at work could only be doubled, the present production rate is either doubled, or attained at half the effort: a win-win proposition worth an investigation.

Comparing Suggestology with other modalities revealed that different people use different labels for the same phenomena which we recognized as involvement of hitherto unused mind energy. That is why we started to simply refer to it as accessing reserve energy. Reserve energy is mind energy which is hidden, neglected or otherwise unrecognized in people, and therefore unused.

We also found out that accessing reserve energy is more than a technique. Acceleration in learning a foreign language or in attaining peak performances in sports are symptoms, external end results which appear to be attained only through following certain techniques. Accessing "reserve energy", we found out, contains something more and beyond technique. Making "reserve energy" really work, in addition to following technical procedures, has to do with an inner re-orientation, an inner "charge" according to Lozanov (1978), a new vista or attitude. It is as if practitioners first go through a transformative process which brings them to a point where they let go of fears, restricted thoughts, attitudes and habits, arriving at a state of mind untouched by previous experiences, patterns, or beliefs. For the purpose of mobilizing "reserve energy" at work this meant that attention had not only to focus on the quality of the visible performance and behavior but also on the quality of the visible elements, such as thoughts and feelings behind them. It meant that responsibility had to be taken also for the quality of thinking and feeling, in addition to doing and performing.

Would such endeavor be practical and feasible in industry and business?

Why mobilizing "reserve energy" at work?

Generally, businesses are not run according to the laws of an Olympic event. A business organization requires high quality and performance on a dependable, solid, everyday basis. For an organization, "Olympic" or "peak" performances which occur sporadically and often by chance are not conducive to everyday production, survival and stability. While technologies of mind control, such as relaxation and visualization, may greatly increase progress in language learning and the chances of winning sports events, we wondered whether the investment of money, time and energy into mobilizing "reserve energy" would sufficiently be compensated by results at work.

This question could only be answered by looking at incidents which are counterproductive to organizational survival and growth, yet cannot be resolved through traditional technical remedies. We looked at incidents for instance, where experts within the very area of their expertise make mistakes, or where senior employees suffer from boredom and demotivation, or where technically competent people reduced their successes through swings in self-confidence, or in temporary inability to control anger, etc.

In all these incidents people's work successes are reduced irrespective of their technical expertise. Since these incidents are not as uncommon as one would wish they were, we must face the fact that work performance is not only dependent on technical skills, but also on factors of a person's mind. Up to now, organizations felt mainly responsible for the quality of visible performance, behavior and technical skills of their employees. In the future, with increased sophistication, automation and competition in the production and market place, industry will increasingly be forced to take responsibility for the quality of their employees' thoughts and feelings where external performance and behavior actually originate.

Our observations indicate that direction and quality of thoughts and feelings indeed play important roles in the application of knowledge and skills. There may be differences in the degree of how the different mind factors effect results. For instance, we observed that directional thought control exerts more influence on manual skills, while emotional and attitudinal factors have greater impact in communicative function, as in sales and service.

We concluded that there is plenty of evidence that "mind factors" or "reserve energy" sufficiently influence the quality of work in order to justify their study, training and application in industry. The benefits are seen in preventing or reducing errors, undesirable communication, low morale, but more importantly, in developing positive attitudes, zest and self-motivation.

Table I: Main Focus of Educational Methods

Traditional Methods of Education focus on	Emerging Methods of Education focus on
conscious mind	subconscious mind
intellect	intuition
logic	emotion
structure, definition	creativity, relaxation
content	process, context
single-path teaching	multi-path, multi-sensory teaching
verbalization	nonverbal expression
analysis, comparison	systhesis, acknowledgment
judgment	description
teacher feedback	reality feedback

Traditional and Emerging Methods in Education and Management

Obviously, traditional company and training policies concentrate on the quality of performance and behavior, focusing on intellect, verbal skills, how-to techniques etc. which are all aspects of the conscious mind. However, when the objective aimed at the conscious mind is in contradiction to stored programs of the unconscious mind, problems arise in forms of credibility gaps, production errors, or unplanned behaviors. It may not be as simple as it sounds here, but this is basically where techniques of mobilizing "reserve energy" come in. The first goal of mobilizing and using "reserve energy" is to re-align the submerged parts of the mind to the objectives of the conscious mind. This is done through processes which neutralize or "de-suggest" existing thoughts obstructive or restrictive to the current needs or objectives. The second step aims at establishing unity and balance, a mind where conscious and subconscious can embrace the desired goals in complete congruence and where intellectual understanding is supported by emotional acceptance. These steps make learning and functioning easy, positive and effortless.

Table 1 presents a partial compilation of elements typical of traditional and emerging learning.

Interestingly, emerging elements are often perceived in opposition to traditional ones. From a practical point of view, however, the emerging elements are not contradictions, but rather extensions of traditional forms of education, dealing with expanded aspects of the mind and its functions.

The study of various modalities claiming access to "reserve energy" and their benefits to higher functioning and performance led to more and more "typical" or predominant learning elements. A partial list of some of these modalities are shown in Table II: Roadmaps to "Reserve Energy."

Table II Roadmaps to "Reserve Energy"

Learning Model	**Authors/Association**	**General Focus**
Hypnosis, Self Hypnosis	Erikson et al.	Pain, Stress, Habit Control, Behavior Modification Psychotherapy
Selective Awareness	Miller, Mutke	
Voluntary Controls	Schwarz	
NLP - Neurolinguistic Programming	Lankton Grinder, Bandler et al.	"Pursuit of Excellence" Behavior Modification
Suggestology	Lozanov, SALT	Accelerated Learning/Teaching
Optimalearning	Barsakov	
Fisher-Hoffman Process	Hoffman	Clears relationship w/parents
Rebirthing	Orr, Ray, Leonard, Laut et al	Frees the mind by increasing the range of what is enjoyed
Meditation	Yoga, Zen etc.	improving life quality through trancendental, spiritual, religious approaches Personal transformation
Tao	Tao Academy	
Science of Mind	Intern. New Thought Alliance	
Course in Miracles	Foundation of Inner Peace	
Peak Performance	Garfield	Peak Performance High Achievement Success Motivation Prosperity etc.
Lifespring	Hanley	
est	Erhart	
Self Actualization	Emery	
New Age Thinking	Tice	

These studies eventually resulted in a composite of twelve elements which became a practical tool for evaluating and comparing modalities, and for selecting seminar topics: Table 3. Since these studies have been done with industry training in mind, some of these elements may present some bias.

Table III: Composite of 12 Learning Elements:

Relaxation
Emotion Spontaneity
Nonverbal Expression
Image Power - Visualization
Self Observation
Intuition
Principle of Suggestion
Intention
Reprogramming
Autonomy - Self-Responsibility
"The Cosmic Link"
Learning by Process

Here are our observations and experiences in connection with the Composite:

1. There is not one single or "magic" element, but rather a spectrum or combination of elements in each modality.
2. We haven't found one single modality using all twelve elements.
3. The use of an element or the number of elements used by a modality doesn't reveal the total quality aspect of a modality. We could observe differences in the quality and depth of the same element in different modalities.
4. The Composite reveals that we do not deal as much with unknown elements, but rather with unused or less used learning dimensions.
5. Quality, depth and effectiveness of a modality are determined mainly by (a) the number of elements involved, (b) their quality and depth, and (c) by the quality, depth, and presentation skills of the teacher.

Now let us overview the main characteristics and benefits of the twelve elements.

The Twelve Common Learning Elements

1. Relaxation

Almost all methods which attempt to access "reserve energy" start out with some form of relaxation, the skill of slowing down and balancing body-mind processes. Nervous tension and stress invariably lead to fear, failure and subsequent energy waste. Its mastery is considered the key to efficient functioning. Calisthenics, breathing techniques, progressive relaxation, mind-calming etc. restore balance and unity of mind and body.

At work, a cool head and a relaxed body allow people to stay kind, rational and versatile. In a state of relaxed and alert concentration it is less likely that people will lose control of their temper or become inflexible and unfriendly.

2. Emotion and Spontaneity

Mismanaged and unreleased emotion are often the reason for defensive and counter-productive behavior. The skill of controlling feelings and emotions leads to spontaneity, or "emotional intelligence," which is developable like physical fitness, or intellectual competence. Good feelings do not result from "luck", but are the effects of a learning process.

On the job, the ability to cope with frustration, anger, and hostility saves a lot of energy; more important, people with emotional know-how will generate energy through their ability to express feelings of kindness, gratitude and recognition. Making people right is a most needed quality to counteract the damages caused by the habit of making people wrong. The skill to stay emotionally balanced, and to restore emotional balance quickly and effectively, is central to winning relationships with employees, customers and superiors.

3. Nonverbal Expression

Most emotions are first displayed through nonverbal signals. Words may hide what we truly think; nonverbal expression discloses the deeper feelings or attitudes of a person. Attitudinal development starts with nonverbal communication. The quality of nonverbal means, such as eye contact, varied voice levels, pauses, music, etc. make communication either more confusing or more effective.

When an employee follows the book of etiquette religiously and is still perceived by the customer as unfriendly, cold, or too businesslike, we observe a credibility gap, an occurrence not uncommon in service industries. A credibility gap exists when the verbal message, what we say, is contradicted by our nonverbal signals, or how we say it. For example, when a salesperson says "I'm glad to help you" in an angry tone of voice.

4. Image Power - Visualization

Everyone does planning in the mind. Thinking in pictures, visualizing an accomplishment, pre-experiencing an event is greatly adding power and quality to a plan's execution. Visualization becomes more and more popular for attaining higher effectiveness in reaching goals. Thought, compounded by vision, sound, touch, taste and smell will fulfill itself at higher speed, accuracy and quality. Multisensory goal-setting makes a planning process and its execution more effective, pleasant and natural, adding health, balance and joy to human functioning.

While words and willpower may have greatest effectiveness on influencing the conscious part of the mind, pictures and image-power allow much greater penetration and effects in the submerged part of the mind. It is not by accident that pre-experiencing sports achievements in all details lead to greater probability of succeeding in them. Planning a workday through imagery, running mindmovies for work events may not capture any gold medals, but it may lead to attaining daily goals with greater ease, precision and satisfaction, allowing people literally to attain and accomplish daily chores and successes at half the effort.

5. Self-Observation

Self-observation requires the skill of patience and suspended judgment. Observing oneself is at the root of self-confidence and autonomy, freeing people from mis-interpretations and prejudices of themselves and others. Self-observation promotes skills of listening to one-self (self-talk), and conscious rehearsing activities.

The benefits of self-observation in business are substantial in several ways: One, self-observation expands self-understanding. You cannot understand anybody more or better than yourself; thus, it increases empathy and consideration which is most valuable in organizational functioning. Two, self-observation in non-critical, non-judgmental ways is a key to control fluctuations of self-confidence. Three, self-observation teaches people how to learn from their own experiences, and how to increase the quality of their experiences by making appropriate adjustments in running the movies of their minds.

6. Intuition

Intuition is the ability to receive messages from the submerged part of the mind without rational processing. Often people claim the use of intuition without having gone through any educational process, making decisions by "hunch and intuition", or by the "seats of their pants." Intuition connects us directly to "reserve energy" and to subconscious intelligence; this is the case when we pose a problem to our mind before going to sleep, and having it solved when waking up. The goal of intuitive development is to attain reliability and trust in this psychic process.

7. The Principle of Suggestion

The principal of suggestion acknowledges the creative power of thought. It says that a new thought produces a new condition, i.e. that thought is creative and reality creating. Positive thought thus will create positive reality; negative thoughts will cause negative effects. Mind is often perceived as consisting of a small conscious, and a much larger submerged or subconscious part. Mind control is the skill to keep the two parts in balance and harmony which adds power to the functioning of the total mind.

The discovery that the quality of our thoughts determines the quality of our conditions such as health, relationships, business success, is one of the most far reaching discoveries of all times.

8. Intention

Did you ever get concerned over being "pre-occupied" about thoughts which distracted you from an original intention? So that you couldn't muster enough momentum to protect it from other concerns? We refer to a phenomenon also known as "pre-occupation". When other concerns become stronger or equally strong as a chosen intention we face conflict which detracts from the successful operation and functioning of our mind. This leads to feeling unhappy and divided, and to ineffectiveness in our actions.

The quality of intention can be greatly enhanced through education as offered for instance through meditation. In business, high quality of intention is generally referred to as 'determination', 'devotion,' or 'dedication.'

9. Reprogramming

Reprogramming refers to stored programs in our subconscious mind, also known as beliefs, attitudes, habits. A change in habit for instance is accomplished in two steps: (1) a process of unlearning, or de-suggestion, eradicating the existing program, and (2) the process of building and installing a new program.

There are many techniques to accomplish this; the success of all depends on a person's belief in the power of his or her own mind, and basic knowledge about the workings of the mind, such as the principle of suggestion. Biofeedback is a very quick way of establishing belief in the power of the mind.

The benefits of reprogramming skills is to master the successful development or modification of an old belief, attitude or habit, to experience, for instance more success with New Year's resolutions, or to adapt more flexibly to changes of policies or the market situation etc.

10. Autonomy - Self-Responsibility

Autonomy is the experience of optimum self-regulation as a healthy base of becoming the person one really wants to be, instead of operating as a puppet of other people's thoughts and intentions. Awareness of self-responsibility is at the root of autonomy or claiming the power of self-regulation.

Autonomy is not counter to organizational adaptation. An autonomous person will adapt to organizational realities through consent, agreement and free will. People with developed autonomy and a sense of self-responsibility are characterized as self-starters, recognizable by their flexibility, understanding, and self-motivation. It is a pre-requisite for practicing participative styles of managerial behavior.

11. "The Cosmic Link"

With this term we refer to experiences of spiritual nature that bring people in touch with the powers of inspiration, of creation, and creativity, either within the context of a religion, or the frontiers of science, such as quantum physics. These modalities acknowledge and develop a person's faculty to transcend and transform themselves for example, from separateness to unity, from specialization to wholeness, from conflict to peace, etc. and to become linked to higher and ultimate qualities of life and aliveness.

12. Learning by Process

A thousand hours of study, analysis and research will not produce the expertise of riding a bicycle while half an hour of actual try-out experience may do the trick. Many learning elements accessing "reserve energy" or attempting to educate the "heart" such as the development of emotional control and intelligence, nonverbal skills, or relaxation will not succeed without experience, process or practical try-out. Practice and repetition, as well as observation of the inner quality of an experience, are the key elements, not diversity or novelty of the learning topic. Results count, not intellectual blueprints.

The sense for process and routine will play in the future a much more central role at work in order to better cope with the repetitiveness of work processes. It is suggested that the quality of inner experience will decide the quality and degree of work satisfaction in the long run. The development of inner-directed skills and know-how will be needed in order to succeed in this endeavor.

Elements in Suggestology

In order to determine which of the twelve elements are most characteristic in suggestology, we refer first of all to the original source of Lozanov (1978). We refer for the benefit of the reader to the actual page number in brackets. For all other sources we follow standard methods of reference.

1. Relaxation

One of the basic principals of suggestology stipulated by Lozanov and followed almost religiously by any other suggestology teacher is "joy, absence of tension and concentrative psychorelaxation." (258). Methods involving mental relaxation have been found superior to the more physical approaches to relaxation, as summarized by Schuster and Gritton (1985). Mindcalming is greatly emphasized by Caskey

(1980), while Dhority (1984) focuses more on centering techniques, visualization, and rapport building in line with NLP (Neuro-linguistic Programming).

There is definite agreement that tension in any form, such as fear, greed, competition etc. is counter-productive to learning and functioning.

2. Emotion and Spontaneity

Lozanov postulated that teachers "must realize that it will be necessary for them, in some cases, to work off the cuff, at their first glance at the material, contrary to the conventional didactic principles." (279) And "teachers should have theoretical and practical training to enable them to utilize the emotional stimulus and the peripheral perceptions."(261). He also considered, as a highly desirable condition for greater learning efficiency, the development of a childlike, playful (and relaxed) state in the learner. In all other suggestology literature: Caskey (1980), Dhority (1984), and Schuster & Gritton (1985) we find numerous and in-depth teachings around emotional skills and competencies. Inclusion of music in various ways in the teaching process is considered part of the emotional make-up.

3. Nonverbal Expression

The use of musical form in unobtrusive ways, the "formulation of small musical didactic theatrical ensembles," (310) "the preparation of posters" (279) are just a few basic suggestions to encourage nonverbal ways of communication. Caskey, Dhority, Schuster & Gritton offer a great variety of well developed material in this direction. Paying attention to the environment, including instructions to parents (311), are other nonverbal approaches to make the learning process more efficient. Throughout suggestology teachings there is keen awareness that incongruency between covert-verbal and covert-nonverbal communication leads to stagnation, confusion and retardation of learning and functioning. Schuster & Gritton (1985) present interesting material about direct and indirect nonverbal suggestions, obviously following up on Lozanov's concept of primary and secondary stages of suggestibility (62).

4. Image Power and Visualization

The use and development of image power is partially a continuation of nonverbal expression (posters, theatrical and video presentations, etc.). Its most creative momentum is experienced in applying images internally – by thinking in pictures – visualizing. Excellent examples of visualization or guided imagery are found in the writings of Caskey (1980), Dhority (1984), and Schuster & Gritton (1985), such as in "Recall of positive learning experience", the "George Concept," just to mention a few.

5. Autonomy and Self-Responsibility

In the process of "teaching students how to learn, the teacher must not only give them the respective material, but he must also teach them how to help themselves in learning it" (261). This, and many other passages by Lozanov clearly set authority apart from authoritarianism, and indicate a genuine thrust toward promoting self-regulation and self-responsibility in the learner. Unlike Lozanov, all other teachers create keen awareness about the great necessity to remove fear, threat and "make wrong" temptations from the learning process. It appears that success in accelerating the learning process greatly depends on the joyous quality of the learning experience derived from self-regulation.

6. The Principal of Suggestion

"Suggestion is usually the counterpart of conviction." (59). Then, Lozanov defines conviction as consisting of logical argument, recoding consciousness, and concentration of attention. Suggestion on the other hand "originates as a direct link between unconscious mental activity and the environment." (59) The subconscious areas through which suggestive factors exert influence are "emotional background, peripheral perceptions, automated details, codes and elements, previous suggestive set-ups, attitudes, motivation and expectancy" (60). Suggestion thus is considered as the means of communication for all mind parts, except the conscious mind. Suggestion is the main avenue to reach and influence the subconscious, enabling the practioner to attain the goals of establishing "unity of the conscious and the paraconscious (251), in order to create accelerating effects on the level of the reserve complex." (201).

Schuster & Gritton (1985) quote Lozanov's definition that "Suggestion is a constant communication factor which chiefly through paraconscious mental activity can create conditions for tapping the functional reserve capacity of personality."

7. Reprogramming

According to Ostrander-Schroeder (1978) "we are all bombarded from the day we are born, with limiting suggestions." Many beliefs, attitudes and habits in the learner require in later stage of life "de-suggestion." One way to accomplish this is through *bypassing* the restrictive barriers through "psychological, didatic and artistic means" (260). An excellent example is found in Dhority (1984) "Getting Started Right" (Chapter 7). A second approach is directed at the resistance factor in an attempt to eliminate the old restrictive social suggestions and to replace them with new and liberating thoughts and attitudes. This process is often attained with success through creative visualization, and the building of trust in a person's subconscious intelligence, as demonstrated in Schuster and Gritton's "George Concept" (1986). A great variety of reprogramming approaches are found throughout suggestology literature and teachings.

8. Learning by Process

Suggestology teaching involves the total mind, not only the intellect. Didactic means cater to intellect; psychological means remove barriers and negative feelings toward learning; artistic means open the learning process to imaginative actions, departing completely from the notion "to fit teachings within the accepted restricted capacity of the human personality." (251). Process teaching promotes autonomy of the individual learning experience through individual process involving guided imagery, to process in pairs and small groups, to the "formation of theatrical ensembles" (310), to the elaborate, multimodal approaches of US practitioners as found in the spontaneous or planned "invitations to play", (Dhority, 1984) etc.

Conclusions

The relatively few sources and their scientific nature make suggestology a good example for analysis within the frame of the Composite of the twelve elements.

Table IV

Mind/learning dimensions	Suggestology
Relaxation	X
Emotion - Spontaneity	X
Nonverbal Expression	X
Image Power - Visualization	X
Self-Observation	
Intuition	
Principle of Suggestion	X
Intention	
Reprograming	X
Autonomy - Self Responsibility	X
"Cosmic Link"	
Learning by Process	X

Each of the eight elements as marked in Table IV reveal in-depth quality in terms of theoretical display of the material and the broad range of application. When some readers feel that other elements also deserve acknowledgement, they may be absolutely right. This paper is a reflection of the research experience within industry and of the writer. There is evidence of the presence of other elements, maybe more on covert level, for instance, pointing in the direction of "The Cosmic Link", when Lazanov refers to the capacity of the central nervous system to perceive directly, adding that "some authors connect this type of nonspecific subsensory reaction with the so-called extrasensory perceptions studied in parapsychology." (5) And there are others.

According to our experience, a modality offering and employing eight out of twelve teaching elements in broad, in-depth ways, is a rating of excellence.

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Pour Mobiliser "l'Energie en reserve" au Travail: Un Ensemble des Facteurs Commun a l'Apprentissage

Ce journal décrit les resultats de nos recherches afin d'atteindre une performance supérieur en rendant accessible le potentiel cacher des gens au travail, et à propos de l'enseignement de tels sujets d'entrainement dans l'industrie. Il présente: des élements d'apprentissage diriger vers des buts traditionnels, et des buts réferrant au super, summum, de résultats d'accomplissement trés élève, de motivation vers le succés, et la poursuite de l'excéllence, etc: les éléments d'apprentissages qui sont prédominant et commun en modalité, avec toutes l'attention sur l'accomplissement supérieur, un ensemble de douze éléments commun d'apprentissage pour des évaluations faciles: aussi bien que pour selectionner des éléments d'apprentissage qualifier pour utiliser dans l'industrie: et un exemple d'une tel analyse estimé qui s'applique a "Suggestologie", la modalité qui a stimuler nos interets pour mobiliser "l'Energie en Reserve" dans le cadre de l'industrie.

Movilizando "Energia Reserva" en el Trabajo: Un Compendio de Elementos Comunes de Aprendizaje.

Este trabajo describe los resultados de nuestra investigación sobre la obtención de un rendimiento alto por medio de la accesion de

"potencial escondido" en personas en el trabajo, y sobre la posibilidad de enseñar estos temas en entrenamientos en industria. Presenta: elementos de aprendizaje dirigidos a goles "tradicionales" y a goles llamados de rendimiento super, cumbre, de alto nivel, motivación al exito, persecución de excelencia, etc.; elementos de aprendizaje predominantes y comunes en modalidades que enfocan en "mayor rendimiento"; un compendio de doce elementos comunes de aprendizaje para evaluación cómoda y comparación entre modalidades, y para la selección de elementos de aprendizaje aplicables a la industria; un ejemplo de este tipo de análisis evaluativo aplicando "Sugestología", la modalidad que estimuló nuestro interes en movilizar "energía reserva" en un establecimiento industrial.

Mobilisierung von "Energiereserven" bei der Arbeit: Eine Verbindung von allgemeinen Lernelementen.

Dieser Artikel beschreibt die Resultate unserer Studien über das Erreichen grösserer Arbeitsleistungen durch das Anzapfen "verborgener Potentiale" bei Leuten am Arbeitsplatz, und über die Lehrbarkeit solcher Konzepte in der Industrieausbildung. Vorgestellt werden: Lernelemente die abzielen auf "traditionelle" Lernziele und auf Ziele, die Super-, Spitzen-, Hochleistungs-Erfolgsmotivierung, die Verfolgung von Vorzüglichkeit, etc. genannt werden; Lernelemente, welche in Modalitäten, die sich auf "Hochleistung" konzentrieren, vorherrschen und üblich sind; eine Mischung von 12 üblichen Lernelementen zwecks sowohl einer leichten Beurteilung und Vergleichung von Modalitäten als auch einer Auswahl von Lernelementen, die in Industriesituationen anwendbar sind; und ein Beispiel einer solchen beurteilenden Analyse der "Suggestologie," der Modalitat, die unser Interesse an einer Mobilisierung von "Energiereserven" in industriellen Situationen weckte.

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A Pilot Study of Accelerated Learning in the Composition Classroom*

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Abstract. This paper describes a pilot study of an elementary composition class that was taught using accelerated learning (SALT) techniques. The study looked at one class as a control group and another class as a test group, both classes doing the same assignment. The control group followed the teacher's standard method, and the test group was introduced to and taught by accelerated learning (SALT) methods: music, concert readings, activation and visualization. Papers were examined and data was collected in four areas: fluency or word count, number of adjectival modifiers used, number of adverbial modifiers used, and sex of writer in pre- and post-tests. Using an analysis of variance, three null hypotheses were formulated, with two of them being rejected for both groups. The method itself was identifiable at only one level, the use of adverbial modifiers. The testing reveals noticeable gains in the boys' writing and usage of adverbial and adjectival modifiers. The results of the study indicated to the researcher that the method, or elements of it, warrants further study in this area.

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Introduction

In the past decade research in the area of composition has flourished, most researchers concurring that teaching and approaching writing as a process is most beneficial to the writer and, ultimately, to the audience. In the plethora of studies done, a variety of methods have been used and examined. Studies range from looking at how a writer approaches a task to looking at products by writers to examining differences between sexes to any number of other approaches. Walter Petty (1978) addressed many of the concerns and problems of researchers in his call for future research projects:

> These questions establish the need to examine the teacher and classroom environment variables that foster unassigned writing. Some teachers say that children will not write unless they are told to do so. Yet, other teachers find that children write a great deal and seek to improve their writing if they are

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*Paper given at Annual SALT Conference, Washington DC, 1985.

not forced to do so. Some new questions need to be asked: Do children struggle as much with writing as I have suggested? Or do they struggle because we have put writing in a framework that inhibits communications and/or expression?

There are, in addition, questions which relate to individual development. Do we need to find out more about behaviorial differences at different maturity levels? Can classroom environment affect these behaiors to any extent?

That request and the conclusions of writers like Britton (1978), Moffett (1968), Graves (1975), Myers (1983), and Murray (1984) coincided with my interest in applying accelerated learning methods in the composition classroom, specifically in the areas of pre-writing, drafting, increasing fluency and producing elaborated details. The question arising out of these interests was just how significant acelerated learning techniques (SALT methods) might be.

I had used some of these methods, such as music and concert readings, already with secondary students in writing workshops and with college students in English classes. In addition, I had drawn on Rico and Claggert (1980) and Rico's (1983) clustering as a pre-writing stimulus and on using visualizing in conjunction with it to further stimulate the writers as pre-writing and drafting processes. I decided to study the use of these techniques and to determine if, by reducing the writers' stress levels in some way, they would become more fluent and produce richer writing, that is, more specific details.

This pilot study was done in Eastern Washington's Laboratory School (The Robert Reid School) with the cooperation of Norma Smith and Carol Hayes, instructors in the classrooms. I used four SALT methods in my study: music, concert reading, activation, and visualization over the period of five days, one hour a day. The two classes involved were 3rd/4th grades, combined grades in both classes. One class (test group) used the SALT approach, and the other (control group) used the teacher's traditional approach to writing, but no SALT methods. Each class did the same assignment over a five-day period, a description of a favorite place.

Procedures

Procedures for Test Group

The first day the test group was introduced to the SALT method by a preview of where we would go and what we would accomplish. With baroque music playing, I set up how successful they would be and how quickly they would be able to gather ideas and write by discussing how their brains worked taking in information in patterns, ideas and sentences. Then I did a demonstration of Rico's (1983) clustering technique, using their teacher as my cluster subject. My perceptions of her were different than theirs, which led our discussion into the unique ability each person has in perceiving what is happening.

Next we reviewed the five senses writers draw on, using examples the students offered. Then, to reinforce understanding of clustering, we did a group cluster of their classroom, everyone contributing ideas for the cluster. The students then wrote their own descriptions of the class, using the elements they chose from our clusters, and turned them in.

The second day we began by previewing the five senses once again, which I used to lead in to a visualization of a walk in the woods. Following the visualization the students clustered or listed all the words that came to their minds and then shared them with the class as we listened for five senses. This session concluded with a concert reading of descriptions of settings from several stories which drew on the five senses.

By the third day the students were excitedly anticipating what we would do. I previewed clustering, the senses and visualizing as tools for writers and then did a semi-guided visualization of a favorite place. Immediately following the visualization, the students went to their most comfortable place in the room to cluster. Everyone wrote, including the teachers. We then wrote a non-stop description of the place, using the cluster for ideas. This session concluded with the students reading over their clusters to themselves before turning them in.

The fourth day the students activated all their writing skills in approaching revising. I previewed and modeled group response to writing with the teacher and an aide, and then the students used small groups to read their descriptions to others and get feedback. This session concluded with all students beginning revising.

The final day of the study their teacher, an aide and I read our revisions to each other, asking for more responses. Then the students followed this procedure, concluding the session by doing a final copy, which was turned in.

Procedures for Control Group

In the control group on the first day, the teacher read examples of descriptions to the class and discussed what went into a description with them. They looked at pictures the teacher held up and each described in one sentence what interested them. Next they listed what was in the classroom and wrote descriptions of it, telling what was important to them in the room.

The second day the class wrote a group description of the room on the board, and the teacher discussed what was good in the writing. She read a description of her favorite place, and then asked them to think about their favorite place with their eyes closed. She concluded by discussing important parts of descriptions.

The third day the teacher began by reviewing how to write a description and what the rules of punctuation and grammar were that the students should remember. The class then wrote their descriptions of a favorite place. These were to be first copies, which the teacher emphasized did not need to be perfect.

The fourth day the teacher used some of the children's descriptions as examples of good writing for the class. She followed this by using examples from some of the papers to show types of mistakes that were being made and discussed how to correct them. Then they worked on revising their papers.

The last day the students worked on revising and on doing their final copies which they turned in at the end of the class.

Collection of Data

The following data was then collected from all of the students' papers:

1. word count of each pretest (room description) and posttest (favorite place description).
2. count of adjectival modifiers in each pretest and posttest paper.
3. count of adverbial modifiers in each pretest and posttest paper.
4. papers were separated into male and female groups for the pretest and posttest.

Differences in Groups in Pretest Papers

Before any statistical measurement was done these figures were noted:

1. Boys responded most favorably in fluency level in the test group compared to the control group (612 test vs. 443 control).
2. Boys also responded most favorably in using adverbial modifiers in the test group compared to the control group (42 test vs. 26 control).
3. Girls were fairly close in both groups in fluency (test 501 vs. control 529).
4. Girls were also close in using adverbial modifiers (test 25 vs. control 29) and adjectival modifiers (test 100 vs. control 85).

In reviewing the pretest papers, the most striking difference evident was in the richness of elaborated detail in the test group, especially in sensory detail compared to the control group. Also, the students projected more authorial presence in the test group than the control group (see Table 1).

Differences in Groups in Posttest Papers

Posttest papers showed improvement in both groups overall, but with some interesting differences between boys' improvement and girls' improvement:

1. The test group as a whole increased most favorably in fluency (test 1955 vs. control 1426).

2. Test group boys increased in fluency more than girls (see Table 1).
3. Test group boys also increased more than test group girls and control group boys and girls in the use of modifiers.

In the test group, the attitude was positive throughout the study for the students, all of them responding favorably to at least one of the elements presented. They enjoyed visualization and clustering as pre-writing activities, getting quite excited about *their* descriptions. Also, the revising process was easier to move into because we *all* worked on it. By using groups and teams, there was more of a shared feeling in the task. The biggest change in these children was in the richness of detail, girls using more sensory details, but the boys using more total modifiers than girls throughout their writing.

Formal Assessment

From this informal assessment of the data, a more complete assessment was conducted. In this part of the study, the SALT approaches were investigated to determine what effect they had on the students' writing assignments, using an analysis of variance.

The null hypotheses formulated were as follows:

1. There will be no significant changes in the fluency status (number of words written) from the pretests to the posttests of third/fourth grade students.
2. There will be no significant differences between the pre- and posttest groups in the number of adjectival modifiers used.
3. There will be no significant differences between the pre- and posttest groups in the number of adverbial modifiers.

Results

The results of the testing were as follows:

1. The fluency category showed a significant change in status from the pretest to the posttest for the entire group (both test and control groups), with a significance level of .016. Hence null hypothesis one was rejected.
2. There were no significant changes in status of adjectival modifiers for the groups from pre- to posttests ($p=.552$). Hence, null hypothesis two was not rejected. However, there was some change evident between males and females in the groups, the boys showing more improvement than the girls, but it was significant only at the $p=.071$ level.
3. In looking at adverbial modifiers, there was a significant increase between pre- and posttests, $p<.001$). Hence, null hypothesis three was rejected.

In summary, the null hypotheses of no significant changes were only rejected in two areas:

Table I: Pretest and posttest data for test and control groups.

Pretest Papers

Criterion	*Test*	*Control*
Fluency	1113	972
Adjectival Modifiers	144	167
Adverbial Modifiers	67	55

Posttest Papers

Criterion	*Test*	*Control*
Fluency	2017	1396
Adjectival Modifiers	190	161
Adverbial Modifiers	207	108

Boys: Postest Papers

Criterion	*Test*	*Control*
Fluency	1253	596
Adjectival Modifiers	130	42
Adverbial Modifiers	106	60

Girls: Posttest Papers

Criterion	*Test*	*Control*
Fluency	702	830
Adjectival Modifiers	77	66
Adverbial Modifiers	84	101

1. Fluency status of both groups from pre- to posttests, posttests being greater than pretests.
2. Adverbial modifiers in both groups from pre- to posttest, posttests being greater than pretests.

However, although not statistically significant, the differences between male and female use of adjectives were also evident, posttest scores being greater than pretest. And, most importantly, the method was evident in the number of adverbial modifiers between the test and control groups, with the test group having a larger mean.

Discussion

Although the method used only showed a significant difference at the adverbial modifier level between groups, some interesting contrasts appeared between the groups.

First, both groups increased in fluency, but the test group increased even more than the control group, the test group gaining 904 words to the control group's 67 words.

Testing	*Test Group*	*Control Group*
Pretest	1113	1359
Posttest	2017	1426

Second, the males' use of adverbial modifiers increased noticeably in the test group compared to the control group in pre- and posttests, but the number was reduced for the statistical measurement so as not to distort the group average: one male outlier who totaled 64 was replaced by the average number of the group (7).

Testing	*Test Group Males*	*Control Group Males*
Pretest	42	26
Posttest	130 (replaced with 73)	42

It is possible that the test group boys were more developmentally ready to move ahead in adverbial development, or that they had not received much stimulus or approval for using this type of description, whereas girls had been encouraged to communicate in these ways, or had already reached this developmental level. Certainly, the boy (outlier) who leaped ahead responded--in fact flourished--with this method of instruction.

In addition, the boys responded more favorably than the girls in both groups when it came to the use of adjectival modifiers, seeming to indicate that they were all ready to respond to sensory detail in writing in some way after instruction.

Finally, what was not tested here is the attitude of the students and the richness of wording. The test group students were busy sharing, comparing, thinking aloud during the posttest period, and they begged for more time in many cases. The words used in the posttests show vividness and feeling in many of the pieces that was not evident in the pretests. Since these students requested the relaxation/visualization before writing and loved the music, it seems evident that it too was carried over into their writing. Out of this pilot project came some interesting possibilities for further study. Under more structured conditions single elements of accelerated learning can be studied so that more accurate testing can be done.

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Une Etude Pilote d'Apprentissage Accéléré dans une Classe de Composition

Ce journal décrit une étude pilote dans une classe élémentaire de composition, qui a été enseigné en utilisant les techniques d'apprentissage acceléré SALT. L'étude envisageait une classe avec un groupe de contrôle et l'autre classe comme groupe d'épreuve, les deux classe faisaient le même devoir. Le groupe de contrôle suivait la méthode etandart du proffesseur, et le groupe d'épreuve a été introduit et enseigné par les méthodes d'apprentissage accélérés (SALT): musique, lectures de concert, activation et visualization. Les papiers ont été examiner et les informations receuillient en quâtre domaine: facilité d'apprentissage, le comptage des mots, numero de modificateurs adjectif utilisé, et le sexe de l'auteur, avant et apres les examens utilisant une analyse de variance, trois hypothèses nulles ont été formulées avec deux qui ont été rejetées pour les deux groupes. La méthode même s'identifiait à seulement un niveau, l'utilization de modificateurs adverbials. Les examens ont revelé des progrès évident dans l'ecriture des garçons et l'utilization des modificateurs adverbials et adjectivals. Les resultats de l'étude indique au chercheur que la methode, ou quelque de ces éléments, justifie des études dans ce domaine.

Un Estudio Piloto de Aprendizaje Acelerado en Clase de Composicion

Este trabajo describe un estudio piloto en una clase básica de composicion que se enseñó utilizando técnicas de aprendizaje acelerado (SALT). El estudio utilizó una clase como grupo control y otra como grupo test, las dos clases completando el mismo deber. El grupo control siguió los metodos standard del maestro, y el grupo test fue introducido a, y enseñado por medio de metodos de apredizaje acelerado (SALT): musica, lecturas en concierto, activacion e imaginacion. Redacciones fueron examinadas y datos reunidos en cuatro areas: fluidez o numero de palabras, numero de adjetivos utilizados como modificadores, numero de adverbios utilizados como modificadores, el sexo de los redactores, en pre- y post-test. Utilizando un analisis de variacion, tres hipóteses nulas se formularon, con dos de ellas rechazadas para los dos grupos. El método en si era identificable a solamente un nivel, el uso de adverbios como modificadores. El estudio revela incrementos notables en el uso de adverbios y adjetivos como modificadores en la escritura de niños. Los resultados del estudio indican al investigador que el método o algunos de sus elementos requieren más estudio en este área.

Eine Pilotstudie von Accelerative Learning im Aufsatzunterricht

Dieser Artikel beschreibt eine Pilotstudie in einer Unterstufenaufsatzklasse, welche mit der accelerative Learning Methode (SALT) unterrichtet wurde. Die Studie untersuchte eine Klasse als Kontrollgruppe und eine andere Klasse als Testgruppe. Beide Klassen nahmen den gleichen Stoff durch. Die Kontrollgruppe wurde mit herkömmlichen Methoden unterrichtet, während die Testgruppe mit accelerative Lernmethoden (SALT) gelehrt wurde: Musik, Konzertlesen, Aktivierungen und Verbildlichung. Aufsätze wurden nach folgenden Kriterien beurteilt: Sprachfertigkeit und Wortanzahl, Anzahl von Adjektiven, Anzahl von Adverbien, und Geschlecht des Schreibers, in Vor- und Nachtests. Drei Nullhypothesen wurden mithilfe einer Varianzanalyse aufgestellt. Zwei davon wurden für beide Gruppen verworfen. Die Methode an sich war nur auf einer Ebene ausschlaggebend, nämlich im Gebrauch von Adverbien. Die Tests erweisen eine merkliche Verbesserung im Schreiben der Jungen und den Gebrauch von Adverbien und Adjektiven. Das Ergebnis der Studie weist darauf hin, dass die Methode, oder Elemente von ihr, weitere Studien auf diesem Gebeit wert ist.

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Love: Unspoken Catalyst of Suggestopedia*

Alison Miller

Abstract. It seems that Suggestopedic techniques, games and baroque music are not enough to achieve the promised high results. All three principles must work together, and the teacher has to have a profound sense of dedication based on love of mankind and a totally positive outlook. It is an understanding of the double plane of communication that is essential, and without love such communication will be without impact.

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In 1979, at the end of my eighth year of teaching foreign language, my teaching and my life were changed. New richness, joy, and a sense of reaching out to others in a special way came into my professional attitudes, and a great message beyond methodology and teaching techniques was clear. Bringing this message to us from Bulgaria was Dr. Georgi Lozanov. In three precious weeks, he shared with us in Orinda, California, the theory and practice of Suggestopedia, a program much more than a method, based on psychology, trust, the arts and on something soul deep. It had to do with love.

Often Suggestopedia is not seen as a philosophy of education, because from the outside a Suggestopedic class is so much fun that it almost looks superficial. The games, the laughter, the singing and even the concert sessions and the lovelier portions of the class do not appear like what the program is really about. It is not always evident that the personality can suddenly free itself from all the blocks to learning and transcend previous accomplishments rediscovering the true joy of discovery and learning which is our birthright. The three principles of Suggestopedia lead to this kind of transformation, but I feel that only with sincerity and love as a catalyst can they work together to produce the high results.

The first principle is that of joy, not the outward joy of the games and activities of the class but rather the joy which springs from our inner drive to learn. We are born with an intent to learn about everything around us, but it seems that over the years we lose sight of our natural abilities to intuitively gather knowledge and experience in a creative way the joy which Dr. Lozanov shared with us. This joy has little to do with the pleasant surroundings, the comfortable chairs, and the colorful posters on the walls, as it is the basis of a whole attitude about learning which produces the same excitement that a child experiences as he is learning for the first time.

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about something new.

Of course included in the first principle is the absence of tension and a state of concentrative psycho-relaxation. The music can help us achieve that alert state, but it cannot be fully achieved without a special kind of trust between student and teacher. The breakthroughs in learning depend on Lozanov's theory of "distant intimacy." Such a trust is built on the prestige of the authority combined with the love of a parent, a powerful combination giving the teacher as well as the student a sense of fulfillment. Albert Schweitzer said, "I don't know what your destiny will be, but one thing I do know. The only ones among you who will be really happy are those who have sought and found how to serve." Basing his program on a love of mankind, the properly-trained teacher has the tools to serve in a meaningful way.

In one sense the love of mankind means allowing the individual the freedom with which to learn and respect his God-given ability. We often try too hard to teach the brain how to learn. I enjoyed hearing Dr. Lozanov talk about how we do not have to teach the brain how to learn. "It already knows!" As educators we often make the mistake of emphasizing methodology rather than directing each group in such a way that the personality is given the freedom and flexibility necessary along with encouragement to tap his creative potential.

Taoist philosopher and poet Chuang Tzu spoke of the same necessary respect for mankind when he discussed "the fluidity of water, not being the result of any effort on the part of the water but as its natural property. Heaven is naturally high. The earth is naturally solid. The sun and moon are naturally bright. Do they cultivate these attributes? The virtue of man is that even without cultivation, there is nothing which can withdraw from his sway." Natural man needs to be appreciated in his own right and respected. He must be given freedom to rediscover his own abilities to assimilate knowledge.

The second principle of Suggestopedia unites the conscious and para-conscious activity of the students and the teacher. Most communication is non-verbal. The teacher's body language, gestures, facial expression, intonation, and even the thought energy forms directly influence the learning process. Concerning this double plane of communication, Dr. Lozanov writes:

> Only when there is sincerity can double planeness be mastered and the desired suggestive effect achieved in the best way...If one's knowledge of double planeness is not perfected, a rush into practicing suggestion is doomed to failure. Double planeness does not mean, however, artifical and theatrical acting or posturing; it must be the result not only of profound preliminary work, but of a great love for one's profession and for one's fellow men. It is only such double planeness that can stand the test of time.

Although I understood the role of non-verbal communication and peripheral perceptions in learning, I found that in practice this was difficult to do. Even understanding the principles in theory and knowing the kind of nurturing role a teacher could have, it was difficult to send non-conflicting signals. When first teaching with Suggestopedia and having those few students in Spanish or French classes who consistently performed poorly, I often found myself returning to my old mode of thinking, "Oh, you poor thing. How can I possibly help you?" Of course I must have been communicating that to the students.

The logical left brain would hear how easy it was to learn and then the right hemisphere of the student would pick up my doubts on the part of the teacher, those doubts perpetuating the student's low expectations thus perpetuating the poor performance. It was not easy to convince the students that it was easy to learn massive amounts of material effortlessly, but let me share with you one technique that helped. Dr. Lozanov's associate, Evalina Gateva, a beautiful model of the philosophy and the high expectancy, taught us how to read to music. After making us aware of the importance of our intonation, our facial expression, the structure of the music, the emotional content of the music, the rhythm and the dynamics, she told us that our concern for reading the concert sessions correctly could itself give the students the idea that the material is difficult. To avoid this, Evalina had us visualize a rose and imagine that we were smelling that rose as we inhaled while reading to the music. Imagining a perfect rose shows the student nothing but positive feelings and high expectancy.

This technique worked well in helping me overcome my habit of expecting poor performers not to achieve. With the billions of neurons in the brain and all the connections and inter-connections having a synergistic effect, man's enormous potential is evident. The "rose" or high expectancy makes it possible to convince any student that there are no limits to learning.

I remember well Alfonso's first day of Spanish class. His obvious apprehension was no different than that of everyone else on the opening day of a foreign language class. As usual, the community college had drawn together a variety of adults from beginning college students to senior citizens, all adding to the excitement and anxiety of their first encounter. It was normal to be afraid.

But, unlike the rest of his colleagues, the young man who chose the name Alfonso was ready to quit after the first class session. He came up to me after class to explain that it had been a long time since he had been in school and that he knew that he could not keep up with the course. He was certain that he would do poorly even after he was told that the course had no requirements besides attendance; that he would be experiencing an unusual method which would make it easy to learn.

I promised him that he would pass the course and that he had nothing to lose. In fact, he had everything to gain, because he could apply this new way of learning to his other classes as well as experience joyful learning. His new name and identity could mean an escape into a different world where all he had to do was participate as much as he wanted. As a "farmer," he could sit back in silent wisdom and robust health if he desired. There was no doubt that he would learn more than he had ever dreamed possible.

Alfonso stayed. And he was not silent. He constantly volunteered to read aloud and actively participated in every class. He didn't seem to remember much Spanish and even by mid-term his pronunication was not very good. He read so slowly at first and with such a heavy accent that the "roses" had to intercede. I had to non-verbally give him the love, the respect, the confidence, the encouragement. I also had to keep reminding myself that he could learn easily, but I sometimes caught myself wondering if Alfonso was the one out of fifteen who could not learn well with Suggestopedia.

In the middle of the quarter, Alfonso again stayed to talk to me after class one afternoon. He had failed his accounting mid-term exam but he had learned so much Spanish. What could he do with the method to improve his accounting? I had to hide my great surprise. I thought, "Am I teaching him something about himself that is untrue?" I had to confront the possibility. I had to face questioning the very method I had grown to love. I took the risk. I told him to read his accounting text to the list of music I had given him. "Get an overview of your text, Alfonso. Scan whole chapters at a time, even many chapters at a time and get a feeling for the whole or for the concepts as they relate to the whole. Do this with a classical piece. Feel the music rather than paying much attention to the accounting. Then sit back, relax, and study the material to baroque music."

By the end of the Spanish course Alfonso had learned quite a lot of vocabulary and could read aloud much better, but the transformation I saw in him went beyond measurable progress and allowed me to believe 100% in Lozanov's system. On the last day of the quarter he came in to tell me about his accounting final test. He had made an A on the exam allowing him to pass the course with a C, and he was grateful. If in my entire teaching career this break-through were the only example of such a gain, then it all will have been worthwhile. Alfonso went on to finish junior college and earn his bachelor's degree.

I ran into him several years later when he returned to the area as a Naval Flight Officer ready to begin flying the P-3 aircraft. He had enlisted in the service and succeeded in bettering his life. I couldn't help but feel that Suggestopedia was not just a method but an entire system with important implications for all education.

The third principle concerns a suggestive relationship on the level of the reserve complex. The proper use of suggestion can unlock the unused portions of the brain, but I will mention this only in terms of the group and how it is affected. There seems to be something about the orchestration of the small group that makes it similar to group therapy. A group is always reluctant to say goodbye after a course, and I as well feel a little sadness to see the group leave. But no matter how close a group seems, there is something instrumental in the guidance of a suggestopedically-trained teacher. Without the "prestigious authority" the dynamics of a group cannot be the same.

When a course begins the teacher is in focus, but as the students gain the tools with which they can perform, the spotlight gradually shifts to them. There is a kind of warmth, acceptance, and sensitivity in the group which takes away competition and aggresive behavior in the classroom. It is more like cued group learning where there is a support which students like "Catarina," who took beginning Spanish three times, can find helpful.

Catarina concealed so well her severe rheumatoid arthritic condition that her slower movements and orthopedic shoes were the only indications. In fact her constant cheery approach and never-failing smile made it impossible for us to believe that in her mid-thirties most of her joints had already been replaced and that she was in pain most of the time. She jokingly called herself the Million Dollar Woman because of all her replaced joints and fused bones. In her state of slow deterioration her positive attitude and interminable inner strength kept her going.

She did well in Spanish, and I was not surprised to see her smile the following fall when she re-enrolled in Spanish 101. I knew that in addition to her interest in the Spanish language, deep breathing, relaxation and visualization helped her cope with her arthritis. Coupled with her optimism, the relaxation seemed to be a powerful medicine. The third fall, however, I was surprised to notice Catarina's name on the class list. An apologetic voice came from behind me on the first day of class that year as she entered the room. "Just ignore me. I won't be here long this quarter." More surgery was scheduled for her in October, and she could think of no better way of preparing for surgery than by taking Spanish, experiencing the warmth and love of the group. How strange her words seemed. Take a foreign language class in order to relax enough to be prepared for a major operation? It sounded absurd to me even as a Suggestopedic teacher, because of the influence of my previous concepts of school and classroom. Again I couldn't help but believe even more strongly in Lozanov's work.

The humanistic elements of Suggestopedia rather than anything else are what convinced me that I could never go back to traditional ways. Teaching became so satisfying that my own happiness increased right along with the learning. I was taking a sincere interest in each student, and the feedback from them was that they perceived this interest. Not one time in the six years that I've used Suggestopedia has a student marked on evaluation forms anything but the highest category for the question: "Did the instructor show a personal interest in you?"

Dr. Lozanov also stressed that the teacher with high expectancy must be a totally positive person. To control negative feelings can also be a challenge, but an Aikido master who took a training course I gave at the University of Hawaii in 1983, had a helpful way for us to visualize the positivity necessary in Suggestopedic teaching. He suggested that we think of ourselves as having a clear glass of water at birth, and as we go through life experiencing negative things and thinking negative thoughts we add dirt to our water making it murkier and murkier. Then once we perceive that positive and negative energies exist anyway, the polarity of positive-negative, yin-yang, then we can choose to let all negativity pass us by without influencing us. Little by little by thinking positively and by not letting negativity affect us we add clear water to our glass. Eventually with enough positivity the glass of water can be as clear as the fresh water with which we started life.

In order for Lozanov's work to have a significant effect on our educational system, we as educators must work at mastering the art of suggestion so that as loving and positive figures of authority we will be able to convince the masses that learning can be effortless and limitless, tapping the natural abilities within the individual.

Perhaps one of the most beautiful discussions of love appears in the New Testament in Modern English for Schools, in First Corinthians, translated by J. B. Phillips.

> This love of which I speak is slow to lose patience--it looks for a way of being constructive. It is not possessive; it is neither anxious to impress nor does it cherish inflated ideas of its own importance...it is glad with all good men when truth prevails. Love knows no limit to its endurance, no end to its trust, no fading of its hope; it can outlast anything. It is, in fact, the one thing that still stands when all else has fallen."

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L'Amour: Catalyseur Inexprime de Suggestopedia

Il est évident que les techniques suggestopediques, les jeux et la musique baroque ne sont pas suffisant pour accomplir les bon résultats promis. Les trois principes doivent travailler ensemble et le professeur doit avoir un profond sens dédicace base sur l'amour de son prochain et une perspective très positive. C'est une comprehension essentielle du plan double de communication, l'impact d'une tel communication est impossible sans amour.

Amor: Catalizador Tácito de Sugestopedia

Parece ser que técnicas sugestopédicas, juegos y música barroca no son suficientes para obtener los resultados altos prometidos. Los tres principios deben trabajar juntos, y el maestro debe tener un sentido profundo de dedicación basado en amor a la humanidad, y una

visión totalmente positiva. Lo que es esencial es una comprensión del plan doble de comunicación, y sin amor esta comunicación no tendrá efecto.

Liebe: Unausgesprochener Katalysator von Suggestopädie

Es scheint, dass suggestopädische Techniken, Spiele und barocke Musik nicht ausreichen, die versprochenen guten Erfolge zu erzielen. Alle drei Prinzipien müssen zusammenarbeiten, und der Lehrer muss ein grundlegendes Gefühl der Hingabe besitzen, das auf der Liebe für die Menschheit und einer total positiven Einstellung beruht. Ein Verständnis der zwei Ebenen von Kommunikation ist unbedingt notwendig, und ohne Liebe ist eine solche Kommunikation wirkungslos.

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Pen Pals: A Relevant Approach To Teaching Basic Writing Skills

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Abstract. This study examined changes in third grade students who participated in an activity-centered program of writing instruction, suitable for the SALT practice phase. The teacher used the Bay Area Writing Project's Process Model to teach writing as opposed to traditional language instruction. The study highlighted a particular occasion for writing, "Pen Pal Time." A step-by-step description is given of the pen pal writing activity including the use of student response groups. The results showed that a real life context (pen pal letters) stimulated writing. The data gathered indicate that the attitude toward writing was improved and that students attained basic writing skills during the process of writing without formal grammar instruction.

* * *

Introduction

This study is about writing in school life. It describes some of the uses to which writing was put in the first six months of school in one third grade classroom. The researcher is an elementary school teacher whose students were reluctant writers, lacking basic writing skills.

Purpose

This investigation was prompted by the teacher's awareness of the need for a more meaningful approach to writing than language workbooks and ditto sheets. The researcher had attended Bay Area Workshops and was motivated by the Bay Area Writing Process Model to crystallize and validate some of the things which she had been doing intuitively as well as try many of the techniques that have been successful for other teachers in writing. The purpose of this study was to involve third grade pupils in teaching-learning activities which would give them improved (more positive) attitudes toward writing and improve their skills in capitalization, punctuation and writing complete sentences.

Statement of the Problem

The problem was to determine the degree to which third grade pupils in a self-contained elementary school classroom would demonstrate motivation and improvement in their basic writing skills when taught via an activity-centered program in writing instruction.

Importance of Writing Skills

Too many Americans cannot compose a simple paragraph, or even write well enough to hold a basic job. Businessmen constantly complain that young job seekers cannot fill out an application form.

Yet the need for good writing is as critical as it ever was. Job descriptions, business letters, financial forms, medical records, journals, diaries, personal letters, and many more are written. If they aren't written well, communication will suffer.

Beyond practical considerations lie considerations of personal improvement. The impulse to communicate something of ourselves is part of being human. In poetry, in the stories we write, in letters to friends and family, we give form to thoughts and feelings. An inability to communicate in this way can be a major disadvantage.

In our society, the classroom is one of the places in which socialization into literacy occurs. By thinking of writing in the classroom in terms of the acquisition of communicative competence, the analytic task becomes one of identifying the occasions on which writing is typically the preferred expressive mode and of discovering the attendant social roles and expectations of teachers and students on those occasions. It is within the medium of those social occasions that the analyst is likely to discover the values and beliefs about writing that are imparted implicitly and explicitly to the child in formal educations.

Methods of Teaching Writing Skills

Unfortunately, in the past, some programs have offered a hodgepodge of language arts activities that often were frustrating to both teacher and students. The spelling words for the Friday spelling test, for example, were usually unrelated to other language arts lessons, and some words may not have even been in the students' working vocabulary. Students moved from assignment to assignment and the label "busy work" came into being for some of the school day. This approach is neither realistic nor educationally sound. The researcher sought an approach which would relate the teaching and learning of writing skills to the pupil's real world.

An activity-centered instructional program, which consisted of finding Pen Pals (volunteer correspondents) and acquiring writing skills by writing and mailing real letters, was selected as the approach. This research will explore the gains in writing skills in third grade pupils in a self-contained elementary school classroom when their instruction in writing is provided in an activity-centered model associated with writing letters to pen pals.

Review of the Literature

Introduction

A growing number of teachers and researchers in composition believe that students write better and learn to write more eagerly when classroom assignments and writing tests are real opportunities to communicate rather than being mere academic exercises. There is some evidence that writing for real audiences (i.e., in a context when there are actual consequences of communication) may result in better writing (Woodworth and Keech, 1980).

Significance of the Study

The study raises an important question -- Are students more likely to produce good writing in contextual situations with opportunity for response and revision than in decontextual situations where the response expected is a grade?

Studying audience effects should contribute to an understanding and the nature of the composing process and the factors which influence students as the attempt to respond to the assignment: "Write."

Past Research

Research reveals that a great majority of beginning third grade children have been shown to be lacking in the skills needed for writing complete, capitalized and punctuated sentences. Children at this age group use an excessive number of run-on sentences and connectives such as "and" in their sentence writing (Hunt 1965). They also frequently omit initial capitalization and end punctuation (Mazur 1976).

Slobin and Welsh (1971) concluded that the intention to communicate plays an active role in determining language performance. Their research shows that real life contexts stimulate intention to communicate more readily than school contexts. If this is generally true, the writing occasion must somehow stimulate intentional communication if we want students to perform at their maximum capacity.

Recent Research

Don Graves is an innovator in the teaching of writing and one of the leading researchers in the field. He has spent many hours in the elementary classrooms studying the processes that children follow as they develop their ability to write.

An important finding has to do with revision. In the standard writing curriculum the teaching of revision, if it is taught at all, comes at the end of the middle grades or in high school. At Atkinson, first-graders began revision by the sixth or seventh month of school.

Graves believes that revision is the key to the whole process of teaching children how to write. He says it is important not to put too much emphasis on spelling, punctuation, and grammar first; those things come later, as the beginning writer gains confidence in his ability to express his thoughts and feelings and becomes more versatile in using that ability. Graves says the young writer will pick up spelling and good grammatical practice as he needs them. The research at Atkinson demonstrated this tellingly: these children were generally far ahead of their age level in their knowledge of mechanics, even though they had never been taught mechanics formally. Mechanics were taught as the occasion demanded as aids to clarify whatever a child wanted to say (Graves 1982).

The Bay Area Writing Project

Graves is a supporter of the Bay Area Writing Project, a national program of annual summer institutes designed to teach public school teachers how to teach writing.

The Bay Area Writing Project's Process Model is a recent staff development program currently being implemented in school districts throughout Alaska. It brings together teachers acknowledged to be already successful, in some way, in the teaching of writing, and facilitates teacher sharing of those successful practices. In doing so, the Bay Area Writing Project was able to isolate and identify particularly useful strategies, apply current research and codify the writing process. Local writing projects do not get a packaged formula for teaching writing, but rather a theoretical context and a group-sharing structure. There is no Bay Area Writing curriculum and no interest in building one.

Conclusions Based on Group Studies

One main conclusion based on replicated comparison group studies is that the teaching or knowing of the grammar of a sentence bears no relation to writing performance.

The Handbook for Planning an Effective Writing Program, K-12, California State Department of Education, 1981, says about grammar:

> Perhaps the most widely ignored research finding is that the direct teaching of formal grammar, if divorced from the process of writing, has no effect on the writing ability of students. Studies from 1906 through 1976 have repeatedly reached this conclusion. It seems to make no difference whether the grammatical system taught is traditional, structural, or transformational grammar. Such instruction, when not directly related with the writing process, does not help students improve their writing. Some researchers, indeed, have concluded that in programs in which the study of grammar takes excessive time that might otherwise be devoted to instruction practice in the actual composing process, the effects are negative. The quality of student writing does not improve and may even decline.

Suzette Elgin, a Professor of Linguistics at San Diego State University and an author of four text books recently wrote in a paper for the National Writing Project: "The formal teaching of grammar in Language Arts classrooms is a waste of time" (The Great Grammar Myth, 1982).

Dr. Elgin presents four arguments that have not gone unsupported by research:

1. Students don't learn the rules of grammar anyway, no matter how much you drill them and lecture them and carry on about it.
2. If the students do accidentally learn something, however fragmentary, there is no positive correlation between that learning and their performance in the Language Arts.
3. The formal teaching of grammar creates in the students a hatred not just for the study of their native language but for the study of any language whatsoever until the end of time.
4. The Language Arts curriculum is already too crowded, and our resources too over-extended, to let us include anything so obviously useless -- if not downright harmful.

Dr. Elgin cites recent research carried out by W. B. Elley and F. O'Hare that was scrupulously designed to meet the most rigorous requirements of the scientific method. The results of that study, along with much useful information about earlier ones, are reported in *The Role of Grammar in a Secondary School Curriculum*. What they found is summed up cogently on the back cover of the book: "The conclusion is thus overwhelming: instruction in grammar has no practical justification, even if it may be justified on humanistic grounds."

Most recent researchers prefer to incorporate the skills traditionally found in "compartmentalized" language lessons (writing complete sentences, subject-verb agreement, etc.) in Language Experience Modules. Each should be developed *during the writing process* instead of in separate, unconnected lessons as they are on workbook pages and in language books. The emphasis should be on helping students develop accuracy in the mechanics of writing, while encouraging them to be specific in the content they write.

Procedure of Research

In an attempt to utilize the research findings and the Bay Area Model, the pen pal project was conceived. A letter to an actual recipient is a natural method of communication. Letters provided the occasions to write and revise.

Elements of a Good Writing Program

Elements of a good writing program as shown by research include:

1. Students write often.
2. Mistakes are treated as a chance to learn and are treated within the context of a student's own writing.
3. Students read large amounts of material written by other students of their age and/or ability level. They also read a great deal of material of the same kind as they are writing.
4. Student writing response groups are used in the classroom (Healy, 1980).

A Motivational Approach

The following ad was sent to *Learning Magazine:*

> "Third grade class in Alaska would like to exchange letters with third graders from other states. Anchor Point School, Box 156, Anchor Point, Alaska 99556."

Purpose

This study was designed to compare the score differences of pre- and post-tests. The tests were the actual letters which were scored individually for three specific skills: capitalization, end punctuation and complete sentences.

Subjects

The subjects were the members of the third grade class in a self-contained classroom in Anchor Point, Alaska. The class consisted of 18 students, 7 boys and 11 girls.

Setting

The focal point of the project was a post office located in the rear of the room. It had a large green mail box for sending out letters and small individual post office boxes for receiving letters. Close by were boxes labeled "Journals" and "Writing Folders". Tables and chairs were conveniently arranged to accommodate response groups.

Occasions for Writing

Each day the students were given a "Choose-Your-Activity-Time." This time could be spent in journal writing, letter writing, or writing and illustrating stories that were filed in the writing folders to become part of student-made books. These activities arose in response to the needs of the classroom.

The main occasion for writing which this study investigates is Pen Pal Time. This descriptive account is offered to give the reader a feeling of the kind of analytic approaches used.

Favorable Reaction

The letters started arriving from different parts of the United States about one week after the ad appeared in *Learning Magazine*. The children were excited about receiving letters and enthusiastic about corresponding with new-found friends.

Rationale

There are three major parts in each learning activity: (1) selecting a writing theme, a writing mode, and periodically, a writing skill; (2) student writing; and (3) students checking their own writing on at least one proofreading thrust.

In this activity program, the language arts are correlated in the Pen Pal Activity. The students' ability to incorporate reading, writing, spelling, speaking, handwriting, and thinking is demonstrated through daily student writing. Because this program provides both structure and flexibility for combining instruction in mechanics and content, the teaching of the language arts may be completely individualized. While the students are writing, the teacher may comment to one student about a word that needs to be spelled correctly and a sentence that might be improved by adding an adjective, comments might be about the clarity of a cause and effect situation and inserting a comma. The focus of instruction for each student depends on what that student has written or plans to write, rather than on selected mechanics or content lessons that may not be useful to the student for what he/she writes on in that day's letter.

There is a delicate balance between helping students improve mechanics without stifling creativity of student written expression. Rather than a haphazard approach, each day has one definite proofreading thrust for the student to concentrate on for improving his/her writing. The proofreading thrusts call attention to the mechanics, capitalization, end punctuation, and complete sentences. The object of each activity, however, is not to overemphasize a proofreading thrust or a writing skill, but to give emphasis to encourage the student in clarity and correctness of written self-expression.

The Pen Pal Activity provides each student the opportunity to express his/her ideas in writing every day. Whether based on an assigned theme or a topic chosen by the student, the ideas expressed and the vocabulary used are those of the student.

Types of Letters

The two major types of letter writing emphasized are short-term (segment) and long-term (time-lapse). The first represents on-the-spot writing with little opportunity for revision, and the second represents writing situations where there is time for additions and revisions.

Segment Writing

Within each 15 days there are five Pen Pal Activities emphasizing short term or segment writing, each of which the student is expected to complete by the end of the 30 minutes.

Since the subject of the segment writing may or may not relate to the major theme, (our major theme was Alaska), teachers and students have the flexibility to develop other themes. This flexibility helps students improve their different writing modes and styles. While each student writes about a particular topic, he/she also learns to incorporate a writing skill -- such as the use and punctuation of contractions -- as opposed to spending time on a separate workbook-type exercise unrelated to any other activity.

One purpose of the segment writing is to teach students that some writing situations mandate closure at a certain time. The letter written by the student at the end of the 30 minutes represents his/her complete letter. A practical example of this type of writing is when one must write and mail a letter by a deadline.

Method For Teaching Segment Writing

1. Select a theme of interest to the class. Examples are: something that happened the day before in the community, a last night's television program, a national event, a weather change, or a new pet of one student.
2. As the subject is discussed, talk about ways to illustrate the writing skill in the lesson plan.

EXAMPLE: The subject is weather change. The skill to be emphasized (the proofreading thrust) is complete sentences. The teacher writes some sentences on the chalkboard about the weather change. She shows what is needed to make each sentence complete. She plays a game to see if the class members can find the incomplete sentences she has written. The examples come from students in the class and the teacher.

3. For approximately five minutes, write examples on the chalkboard and leave them for the remainder of the activity.
4. Students write, including the writing skill and subject chosen, in their writing.
5. Within eight to ten minutes of the end of the activity, call time and ask the writer to place a small check above at least one example of correct usage of the proofreading thrust, or the writing skill you are emphasizing for the day.

EXAMPLE: The student would read his/her letter over and find a complete sentence and place a small check above it.

You should adjust proofreading demands to the abilities of the students throughout the year. They should neither detract from the writing exercise nor discourage the writer. The object is to provide time during each day for students to grow toward independent writing and proofreading.

Time-Lapse Writing

The development of the subthemes is called time-lapse writing and represents an important concept. On one day, the student begins a writing related to the subtheme. On the following academic day, the student adds to the writing, and if appropriate, revises it. Not all writing is completed at one setting, and time-lapse writing helps students develop the habit of adding to their written work on a different day. In addition, with at least one night between the writings on the same subtheme, students begin to think of other items to add to their writing and have an in-school opportunity to expand the initial writing.

Method for Teaching Time-Lapse Writing

1. Either use the subtheme you have chosen in your unit plan or substitute a topic that can be extended for two days.

EXAMPLE: Some of the subthemes in this researcher's unit plan included:

our state, Alaska (history, geography, general information about Alaska)

our community, Anchor Point (population, unique features, special attractions, etc.)

our area, the Kenai Peninsula (wildlife, tourism, etc.)

2. Write the title of the subtheme on the chalkboard, and discuss the topic for approximately five minutes.
3. Write on the chalkboard some of the words, phrases, or sentences related to the topic that are volunteered by students. In most instances, students volunteer a variety of word associations which they relate to a topic. If the student can justify a relationship between words volunteered and the topic, accept the student's thinking -- even if the association is indirect.
4. Each student begins an original, creative writing exercise related to the topic. In the Pen Pal Activity, even though the finished product is a letter which will be mailed, writing is not limited. The letter may consist of stories or poetry. The writing mode may vary among the students depending on their interests and abilities.
5. Ten minutes before the end of the activity, call time, and ask each student to proofread his or her paper using the proofreading thrust chosen for that day's activity. Students use the procedure described in the Peer-Interaction Proofreading section.
6. Rather than mailing the letters, collect them and keep them in the desk for easy distribution back to the students at the beginning of the next day's time-lapse writing on the same subtheme.
7. On the second day, lead a discussion related to the topic but direct the discussion to include ideas and information not discussed on the previous day. Write words and phrases volunteered by the students on the chalkboard as before.
8. Papers begun the first day are returned.
9. The students read their papers, correct any errors they note while reading and add to the content of the first day's writing, using the ideas provided from the introductory discussion or others they choose.
10. The student proofreads his/her paper for the proofreading thrust suggested and then moves into a response group.
11. When interaction with the response group is completed, the writer revises or makes corrections on his/her own letter.

Together, the time-lapse writing and the segment writing form a complementary framework of writing instruction. Without the internal components, the proofreading thrusts and the response groups, however, there is no built-in system for the daily improvement of writing mechanics.

The Proofreading Thrusts

Each Pen Pal Activity contains a teacher-chosen proofreading thrust, the major purpose of which is to help students develop the habit of self-checking their written work before turning it in. Coupled with that purpose is teaching students specifics to direct their attention toward while rereading their letters. They provide the student with a specific guide for checking their papers.

Peer-Interaction Proofreading -- Response Groups

For decades, teachers have collected some of their student papers taken them home, spent hours reading and marking them, and returned the papers. Some students glanced at the marks, and that was about it. The teacher did the proofreading, and few students benefited because they did not go through the process.

Recent research indicates that the use of student response groups is an effective means both to enable students to help each other with their writing and to lessen the paper load for the conscientious teacher who believes that students learn to write by writing (Healy, 1980).

Method for Establishing Response Groups

It is important for the teacher to establish a model for peer-interaction proofreading that contains distinct guidelines and procedures that are understood and strictly followed by all students. The model should provide for both positive marks and positive comments. The single proofreading thrust (on segment writing days) limits the task to each student. The procedure outlined below should be implemented on time-lapse writing days only. Teachers may wish to write the appropriate steps on the chalkboard until the students become accustomed to the procedure.

Step 1. The writer makes a check above at least one example of correct usage of the proofreading thrust.

EXAMPLE: Proofreading Thrust: capitalization

I live in Anchor Point.

Step 2. Students take their letters to assigned response groups.

Step 3. Students exchange letters for the peer-interaction proofreading session.

Step 4. The proofreader makes a check above one other example of correct usage of the proofreading thrust.

Step 5. The proofreader asks the writer questions about sentences he does not understand. This shows the writer that the sentence needs to be clarified either by corrections or revision.

Step 6. The writer reads his/her letter to the group. They discover that in the act of reading aloud, they themselves hear omissions in their papers. It becomes common for a student reading a paper out loud to stop, reread a phrase, and make a change before moving on to the next line. "That doesn't sound right" is a frequent reaction of the writer upon a first reading aloud. "I forgot to tell you about the part when ... " or "There's something missing here" are other common reactions by writers to their own work. These writer reactions occur even before the small group begins to respond to the letter.

Step 7. Students interact with members of the group regarding their letters. Students go back to their desks and make corrections or revisions.

Step 8. When the student is satisfied with his/her letter, it is deposited in the mail box.

Pen Pal Time

Pen Pal Time emerged into a pleasant daily routine. The letters from pen pals were distributed in the proper boxes by the monitor. After several months, regular pen pals had been established and the letters were addressed to specific individuals. The segment writing letters had covered such interests as family, friends, favorite foods, pets and hobbies. The correspondents had become good friends and most had exchanged pictures.

The participating teachers appreciated the informative letters about Alaska and reciprocated by encouraging their students to write about their own respective states.

The response groups become useful working tools to facilitate the writing process. It takes at least two months of practice, patience, careful planning, and training of students unfamiliar with the process. But students do respond to one another's writings to become, in effect, each other's teachers.

Presentation and Analysis of Data

The pupil motivation rating scores were made by the teacher after a writing assignment was given at the beginning of the school year and again during the middle of the school year. The teacher used a check list which rated the behavior of each student in regard to his or her attitude toward writing.

The capitalization, punctuation, and complete sentence rating scores were obtained from pretests (copies of letters written during the beginning of the activity-centered experience) and post-tests (copies of letters written six months later).

The individualized nature of the pen pal letters made it necessary to determine a rating scale for each letter. For the capitalization scores, the possible correct capital letters in each letter were counted. This number was divided by 100, giving each a percentage value. Then the errors in capitalization were counted, multiplied by the percentage value and subtracted from 100.

The same procedure was done on each paper for punctuation and complete sentences. Thus, each paper was given three percentage scores, one for capitalization, one for punctuation and one for complete sentences.

Even though this study was a descriptive case study and not experimental in design, the researcher used the t-test at .001 level of confidence to determine whether differences between the means of the pretests and post-tests were significant.

A measure on the criterion was taken prior to the administration of the treatment (the activity-centered program) and a second measure was taken following the treatment. The researcher, of course, was interested in the effectiveness of the treatment as reflected by the change in the mean performance of the group from the pretest to the post-test.

The results of observations made on attitudes towards writing support the hypothesis, there was an improvement in attitude toward writing in 78% of the class members (Table 1).

The researcher used the *t*-test for testing the hypotheses. Since the two sample measurements are taken on the same individuals, the correlation between the two measures must be considered in the standard error of the difference between means. This is done by creating a new variable D, which is the difference between a subject's first score and his second score (i.e., $D= X_1-X_2$). These score differences were then used in the results obtained in a comparison of the two tests.

The *t*-test is commonly used when the sample N is 29 or less, as in this study, and determines if the hypotheses can be accepted or rejected.

Table I: Results of Observations Made on Attitudes toward Writing

	Beginning of School year	End of School year
Very Favorable	16.5%	27.5%
Favorable	16.5%	60.5%
Indifferent	22%	11%
Unfavorable	22%	0%
Very Unfavorable	22%	0%

78% Attitude Improved, 22% Attitude Stayed the Same, 0% Attitude Declined.

The results of observations made on attitudes toward writing shows a significant improvement from beginning to mid-year.

The result of the *t*-test indicates that there was a significant differences in student's scores in capitalization before and after the activity-centered program for the particular subjects involved in this study (Table 2).

Table II: Results of Pre- and Post-tests on Capitalization

		Class Average
Pre-test	Given at beginning of school year	50.72%
Post-test	Given at middle of school year	86.55%

100% of class members improved in test on capitalization.
35.83% increase in class average scores on capitalization.

The result of the *t*-test indicates that there was a significant difference in scores before and after the activity-centered experience. (*t*=6.06, df=17, p<.001)

The results of the *t*-test indicate that there was a significant difference in students' scores in punctuation before and after the activity-centered program for subjects involved in this study (Table 3).

Table III: Results of Pre- and Post-tests on Punctuation

		Class Average
Pre-test	Given at beginning of school year	43.27%
Post-test	Given at middle of school year	86.55%

100% of class members improved in test on punctuation.
43% increase in class average scores on punctuation.

The result of the *t*-test indicates that there was a significant difference in student's scores in tests on complete sentences before and after the activity-centered experience. (*t*=7.03, df=17, p<.001)

Table IV: Results of Pre- and Post-tests on Complete Sentences

		Class Average
Pre-test	Given at beginning of school year	37%
Post-test	Given at middle of school year	69%

100% of class members improved in test on complete sentences.
32% increase in class average scores on completed sentences.

Discussion

This project had some unexpected benefits. The class involved received a wealth of material and pictures from all over the United States. The large wall map was a constant center of attraction. Not only did writing become more relevant, but so did Geography and Social Studies.

Many of the schools sent cassette tapes along with their letters. In turn, the Anchor Point students became involved in several worthwhile Language Arts activities using the tape recorder.

Often the letters written by the students related to science projects or new math concepts. This activity was "writing across the curriculum."

Limitations of the Study

Although descriptive case studies such as this are one of the most valuable types of research open to the educational practitioner, they are also fraught with pitfalls. It is possible to reduce the influence of certain variables but it is difficult, if not impossible, to know with certainty which variables have produced the results. For example, this study does not show that the gains found are necessarily a result of the Bay Area Method, but it does show that, whatever the cause, the gains between pre- and post-tests are significantly different, above chance at a .001 level of confidence.

Despite the research efforts being made at present, there is still much need for even greater amounts of research in this area.

Future Directions For Research

It seems that this investigation has reiterated the Healy (1980) findings of the worth of response groups and confirms the findings of Woodworth and Keech (1980) that students are more likely to produce good writing in contextual situations with opportunity for response and revision than in decontextual situations where the response expected is a grade. However, the whole area deserves some further attention. It is suggested that a replication of this study be conducted using an urban sample. Furthermore, of considerable interest would be an investigation using a larger number of students in an experimental design research with a control group in another school.

Results

Students demonstrated heightened enjoyment in the writing process. The overall attitude toward writing was improved.

Students showed improvement in the use of basic writing skills acquired during the process of writing to pen pals. The attainment and retention of such skills as complete sentences, end punctuation and capitalization were facilitated by the activity-centered writing project and the Bay Area Project's Process Model.

Concluding Statement

The decline in writing skills can be stopped. Today's back-to-basics movement has already forced some schools to place renewed emphasis on the three R's, and the teaching of writing is becoming an extremely popular topic among educators. Although the inability of some teachers to teach writing successfully remains a big stumbling block, the Bay Area Writing Project and similar programs are getting more and more support. Teacher-training workshops are being conducted across the nation. When these teachers return to their schools, they conduct training programs of their own. The idea has spread throughout the country, and James Gray, who founded the Bay Area Writing Project in 1974, now administers a National Writing Project with 80 sites from coast to coast.

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Correspondants Epistolaire: Une Approche Approprie des Notions d'Ecriture de Base

Dans cette etude nous avons examine des changements dans les eleves de la troisieme annee qui ont participer dans un programme d'enseignement d'ecriture convenable pour une phase de pratique SALT. Le professeur à utiliser le processus du modele du projet d'ecriture dans la ville de San Francisco dans le secteur de la Baie pour enseigné l'ecriture opposé à l'instruction traditionnel des langues. L'etude a souligné une occasion toutes particuliere pour ecrire, "le moment de la correspondence." Une description a été donner de cette activité d'ecriture et de la correspondence epistolaire avec des groupes d'étudiant qui on repondu aux lettres des etudiants de plusieurs pays étranger. Les resultats de ces lettres dans un contexte de la realite de la vie de tous les jours (la correspondence epistolaire) stimulait l'ecriture. Les information qui ont été receuillit ont indique que l'attitude envers l'écriture s'etait amelioré, et que les étudiant ont atteint des notions d'écriture de base durant le processus d'ecrire sans instruction de grammaire formelle.

Amigos de Correspondencia: Un Metodo Pertinente para Enseñar Básica Destreza en Redacción

Este estudio examinó cambios en alumnos de tercer grado que participaron en un programa activo apropiado para una fase de practica SALT para enseñar redaccion. La maestra utilizo el "Bay Area Project's Model" para enseñar redaccion en contraste con enseñanza tradicional de lenguaje. El estudio enfocó en una ocasion especial para escribir: "Amigos de Correspondencia". Se da una descripcion paso por paso de la actividad de correspondencia incluyendo el uso de respuesta de grupos de alumnos. Los resultados mostraron que un contexto de vida real (correspondencia de amigos) estimulo la redaccion. Los datos obtenidos indicaron que actitud hacia redacción mejoró y que alumnos obtuvieron basica destreza en redaccion durante el proceso de escritura sin enseñanza de gramatica formal.

Brieffreunde: Ein relevanter Zugang zum grundlegenden Schreibunterricht

Diese Studie untersuchte Änderungen in Drittklässlern, die an einem aktivitätsbetonenden Programm des Schreibunterrichts, das passend für SALTs Praxisphase war, teilnahmen. Der Lehrer verwendete das Bay Area Schreibprojekt-Prozess Modell im Schreibunterricht anstelle des traditionellen Sprachunterrichts. Die Studie beleuchtet besonders den speziellen Anlass zu schreiben: die "Brieffreundzeit." Eine detaillierte Beschreibung der Brieffreund-Schreibaktivitat wird gegeben, einschliesslich der Anwendung von Schülerantwortgruppen. Die Ergebnisse zeigten, dass ein lebensnaher Rahmen (Brieffreundschaft) das Schreiben anregte. Die gesammelten Daten deuten darauf hin, dass sich die Einstellung zum Schreiben besserte und dass sich die Studenten grundlegende Schreibfähigkeiten während des Schreibprozesses aneigneten ohne formellen Grammatikunterricht.

Bookreview

Improving Pragmatic Aspects of Learner's Interlanguage
by Mary E. Wildner-Bassett

Tübingen, W. Germany: Gunter-Yarr Verlag, 1984, 413 pp. $50.95
Reviewed by Loren Alexander

Mary E. Wildner-Bassett's *Improving Pragmatic Aspects of Learners' Interlanguage* presents an analysis of an experiment with SALT/Suggestopedia techniques in a program for teaching English to advanced learners who were members of a German business firm. ("Interlanguage" refers to a stage of development of second language skills in which the first language is still involved in the second language.) Wildner-Bassett focused on the measurement of growth toward native-speaker functioning with gambits (elements of discourse that maintain order in communication and that establish rapport) as a determiner of the relative success of the two methods: 1) SALT/Suggestopedia, and 2) the eclectic method in use by the language staff. The combination of qualitative and quantitative research resulted in a rather thorough and clear picture of the investigative procedures and of the analytic outcomes. There are drawings, charts, and various sample materials in the appendix to assist the reader. However, the attempt to quantify role-enactments with native-speakers, which were videotaped and coded for analysis, resulted in an overemphasis on the quantitative factors. This quantification of aspects of linguistic behavior could have been balanced by employing the qualitative measurement techniques of the Interagency Language Roundtable's well-researched proficiency interview scale. This proficiency scale is a prose description of specific levels of language control and relies on a judgment of linguistic skill that is based on an individual interview.

The thorough information on her procedures given in this book makes it possible for the reader to draw some solid conclusions concerning the experiment. Unfortunately, SALT/Suggestopedia is not represented well by this experiment. The presentation (Pre-Session) phase was given by tape recording; a live rendition carries much more impact, due to the paralinguistic features this adds. The activation followed this, and was evidently given more emphasis than an introductory phrase warrants in SALT/Suggestopedia; an interwoven activation as part of the general Pre-Session with minimal emphasis on learners' interactive involvement at this stage maintains the aura of a non-threatening atmosphere. There is no clear indication of what music was played; the selection of music relates closely to the assumption of SALT/Suggestopedia concerning effect on the listener, and needs to be clarified for the reader. Control over the instructors' lessons was provided by a brief introduction to the elements of SALT/Suggestopedia and a pamphlet; the teachers were free to determine their own lessons; one must adhere to the various aspects of SALT/Suggestopedia in order to claim that one is using it, thus the lack of documentation on the teachers' implementation of the tenets of the method means that we have no assurance that it was used and/or to what degree. The written texts of the lessons were withheld until the active session; did the control group also work without the written text in the introductory phase? In view of the above, one would want additional information in order to be able to accept the conclusions of the research.

In addition to these aspects, which seem to not represent SALT/Suggestopedia, there were aspects of the control group procedure that reflect a similarity to the SALT/Suggestopedia procedure: 1) "modern" labs, with students in a semi-circle around the instructor; 2) attention to pictures on the walls; 3) the teachers "already employ many of the salient features of the experimental method" (152); 4) a regular program of intensive English courses--eight hours per day for one to twelve weeks; 5) a goal of "active functional bilingualism"; 6) music appears to be a key instructional factor, rather than a mere "placebo", which latter assumes much additional performance from the instructors in the way of teaching style (i.e. dual-planeness).

Wildner-Bassett concluded that the control group gained more control of gambits and was better at diminishing fillers and hesitation. The eclectic method appears to work better than SALT/Suggestopedia for gambits' learning. Not figuring strongly in Wildner-Bassett's conclusions were the results in the use of categories of gambits and quantity of gambits in a measurement of the group discussions: The experimental group (SALT/Suggestopedia) employed 101 categories in contrast to the control group's (eclectic) 73, and 408 gambits in 51 minutes in the experimental group in contrast with 409 gambits in 79 minutes in the control group. These results of group in contrast to the individual evaluations of the main focus of the investigation present a stark contrast to the overall conclusions.

Although some of Wildner-Bassett's conclusions should be rejected for the above reasons, the thoroughness of much of the report on this research effort is commendable. Wildner-Bassett shows the "permeability of the interlanguage system." The serious attempt to include a qualitative approach assists the reader in drawing his/her own conclusions.

The careful presentation of terminology, hypotheses and complex statistical evaluation tools as well as a rather well-written report are an example for others to follow. We need more such investigations; experiments that apply solid qualitative research to accelerated learning.

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